Serial No.: 09/526,193
Applicant: Hayden et al
Filed: 15 March 2000
Attorney Docket: 760050-19

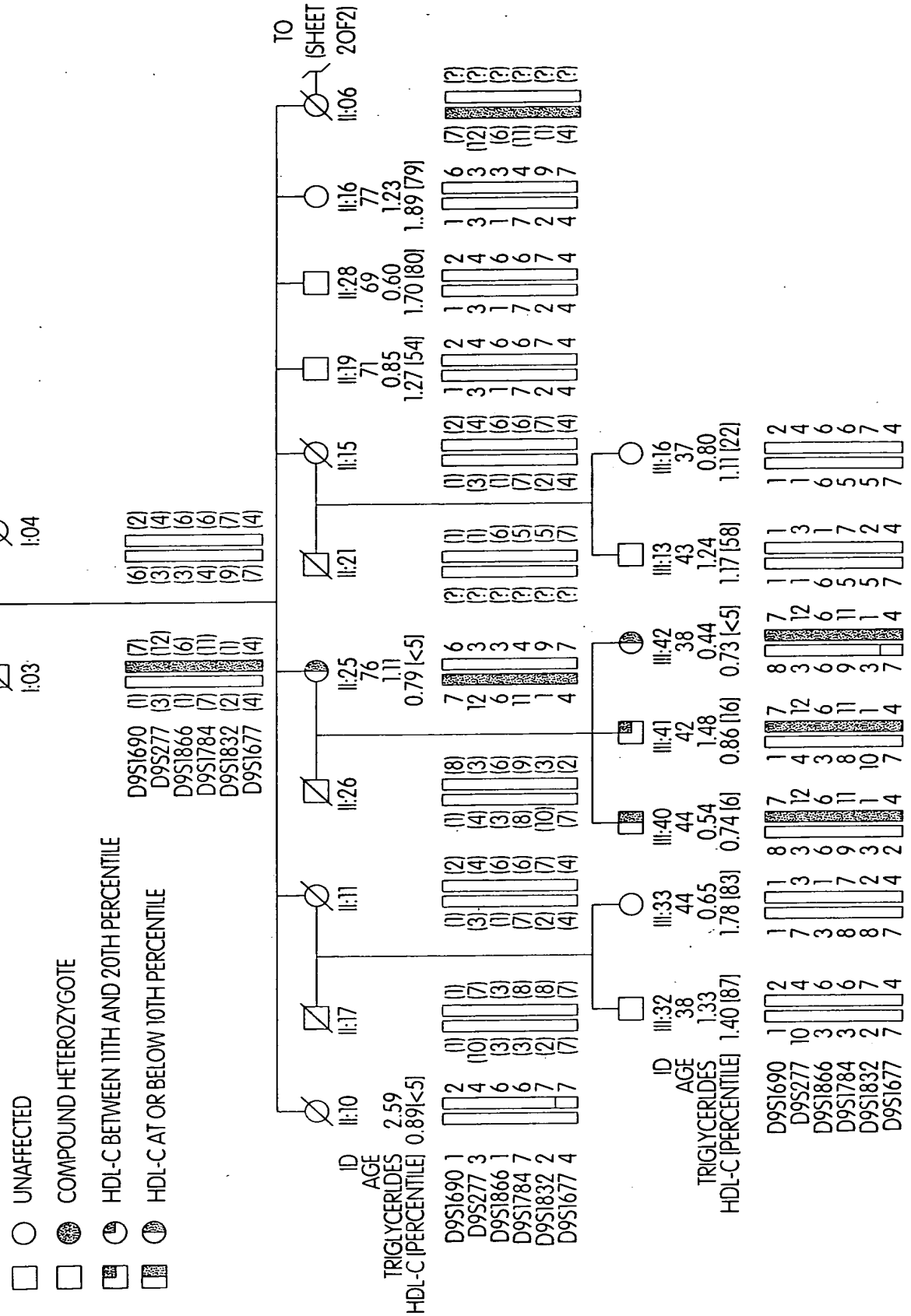

Fig. 1 (SHEET 1OF 2)

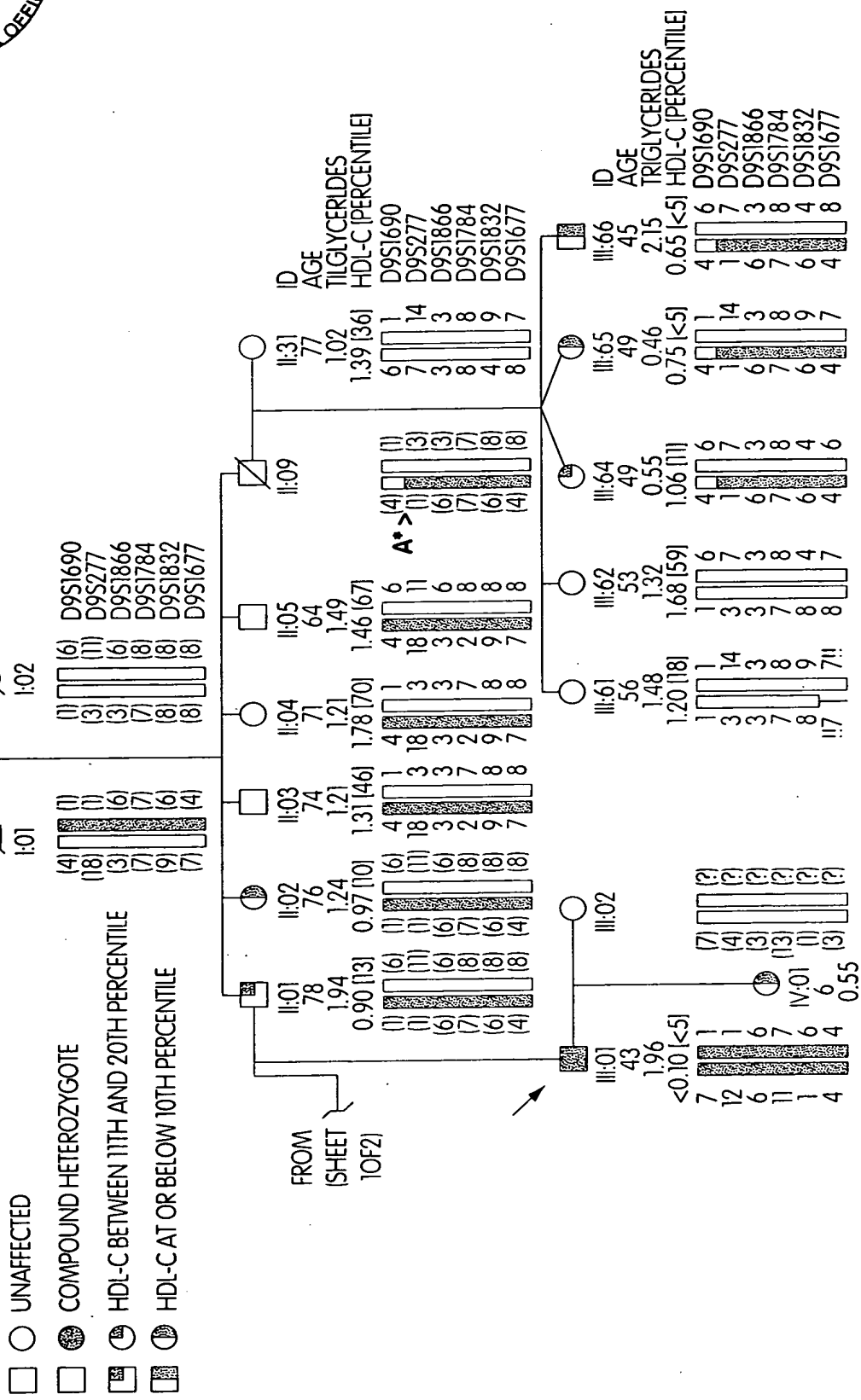

Fig. 1 (SHEET 2 OF 2)

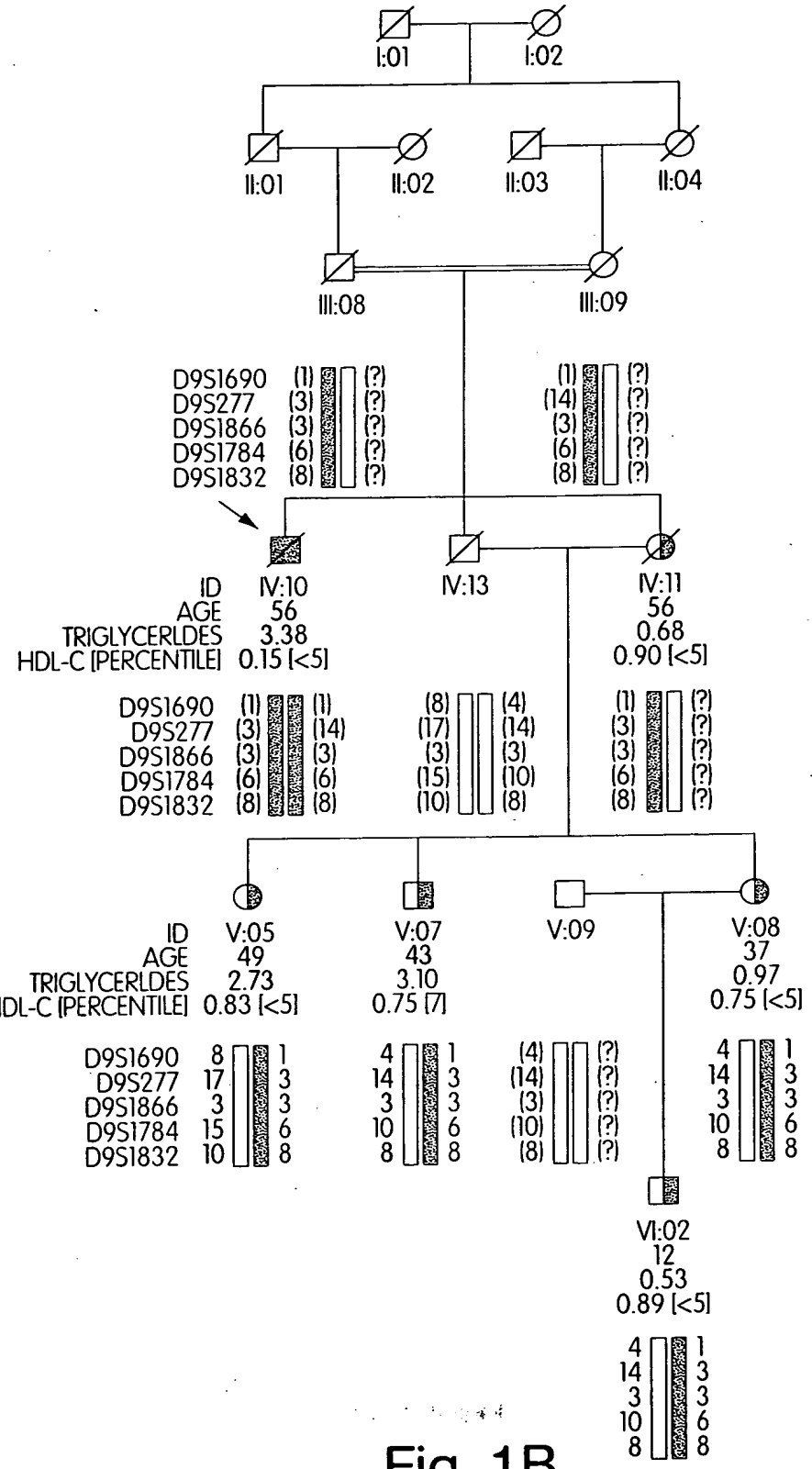

Fig. 1B

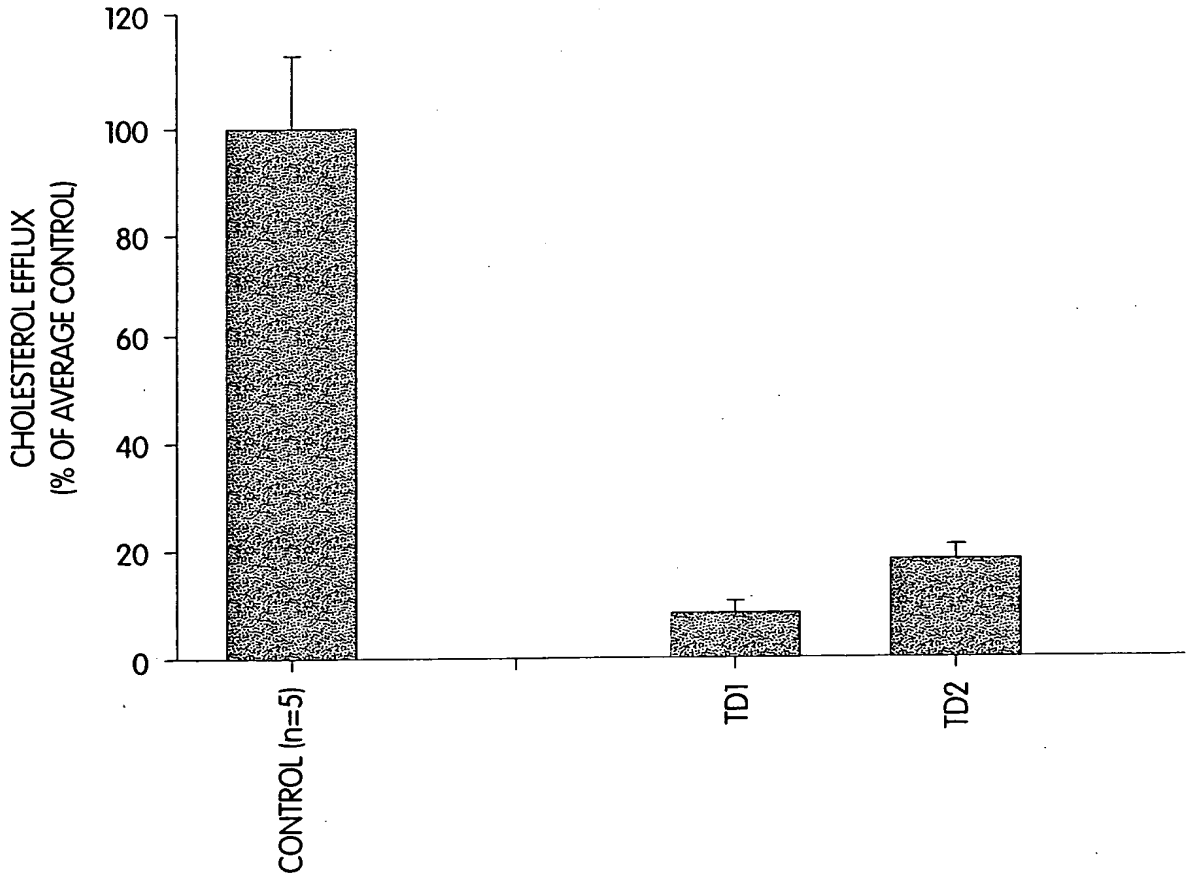

Fig. 1C

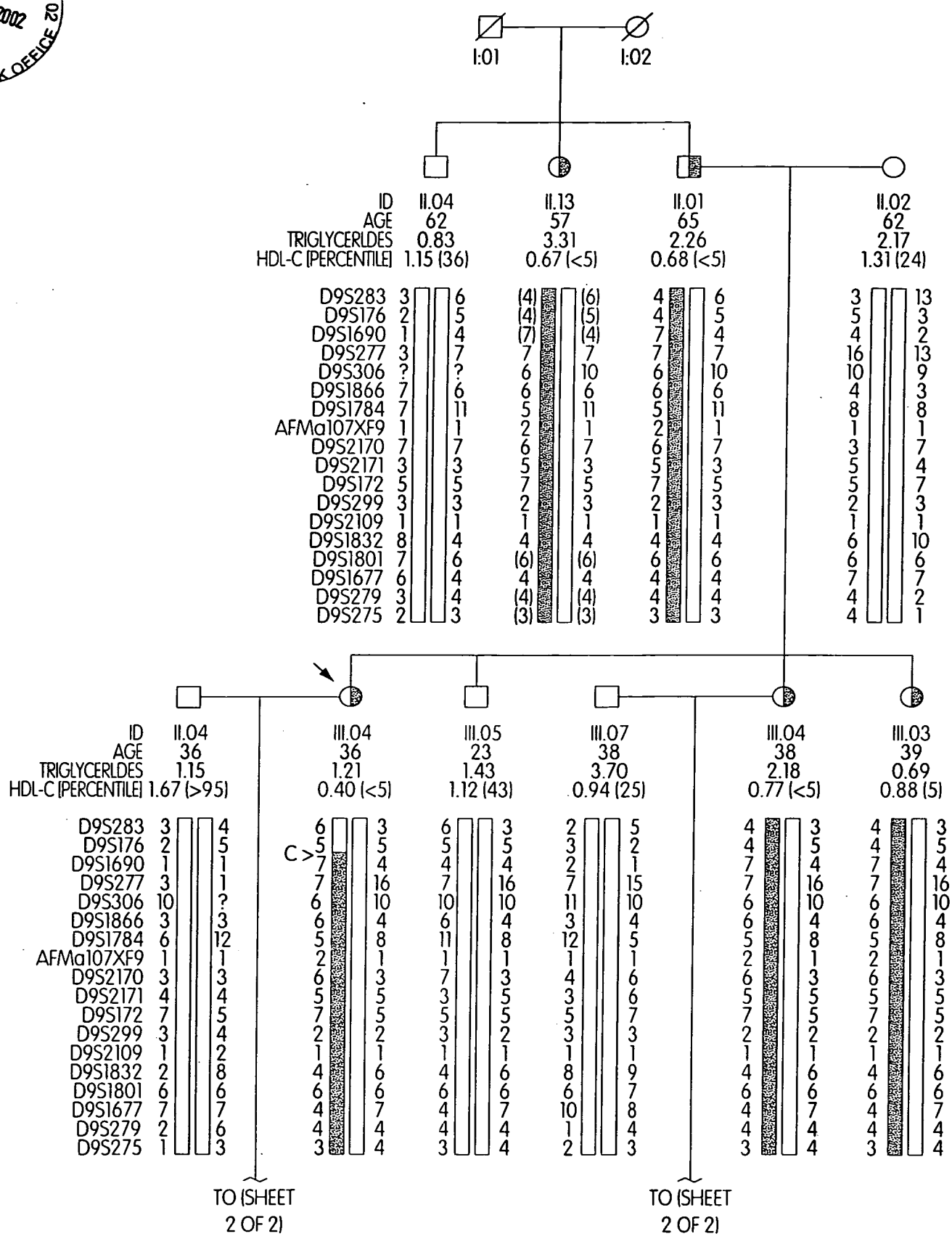

Fig. 2A (SHEET 1 OF 2)

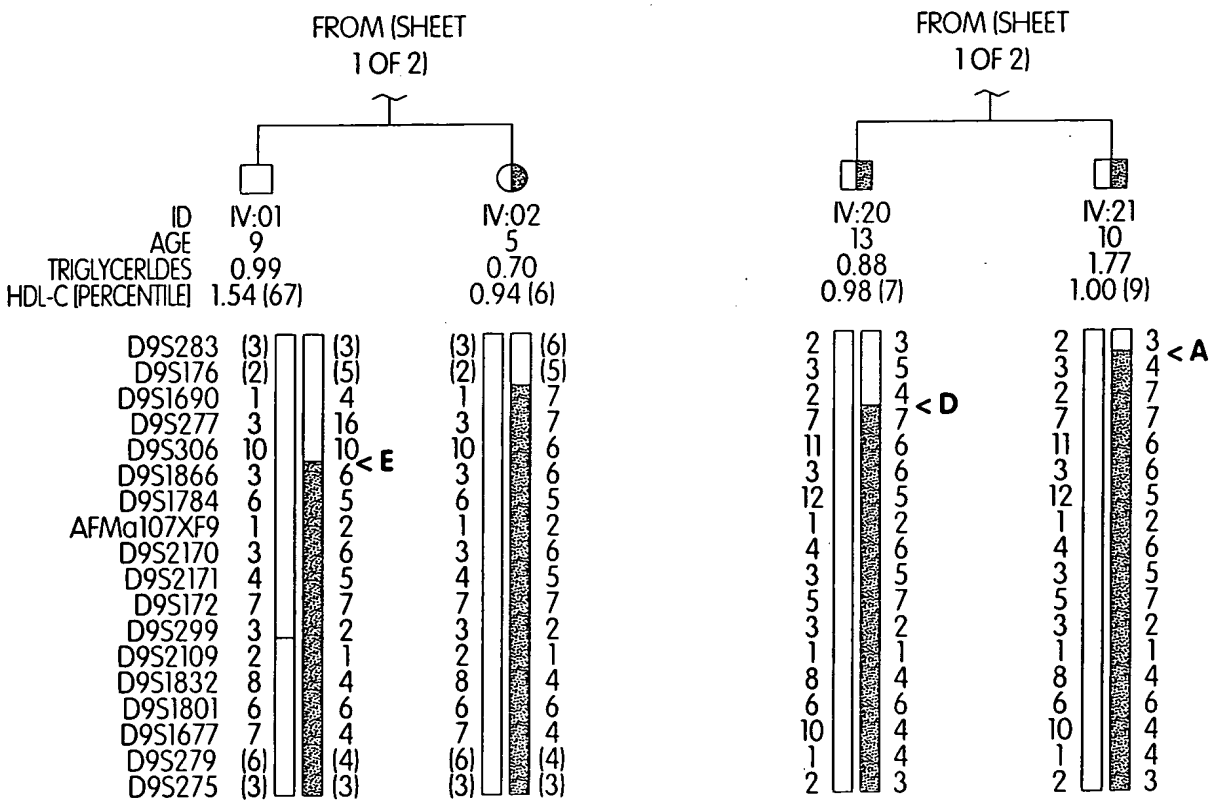

Fig. 2A (SHEET 2 OF 2)

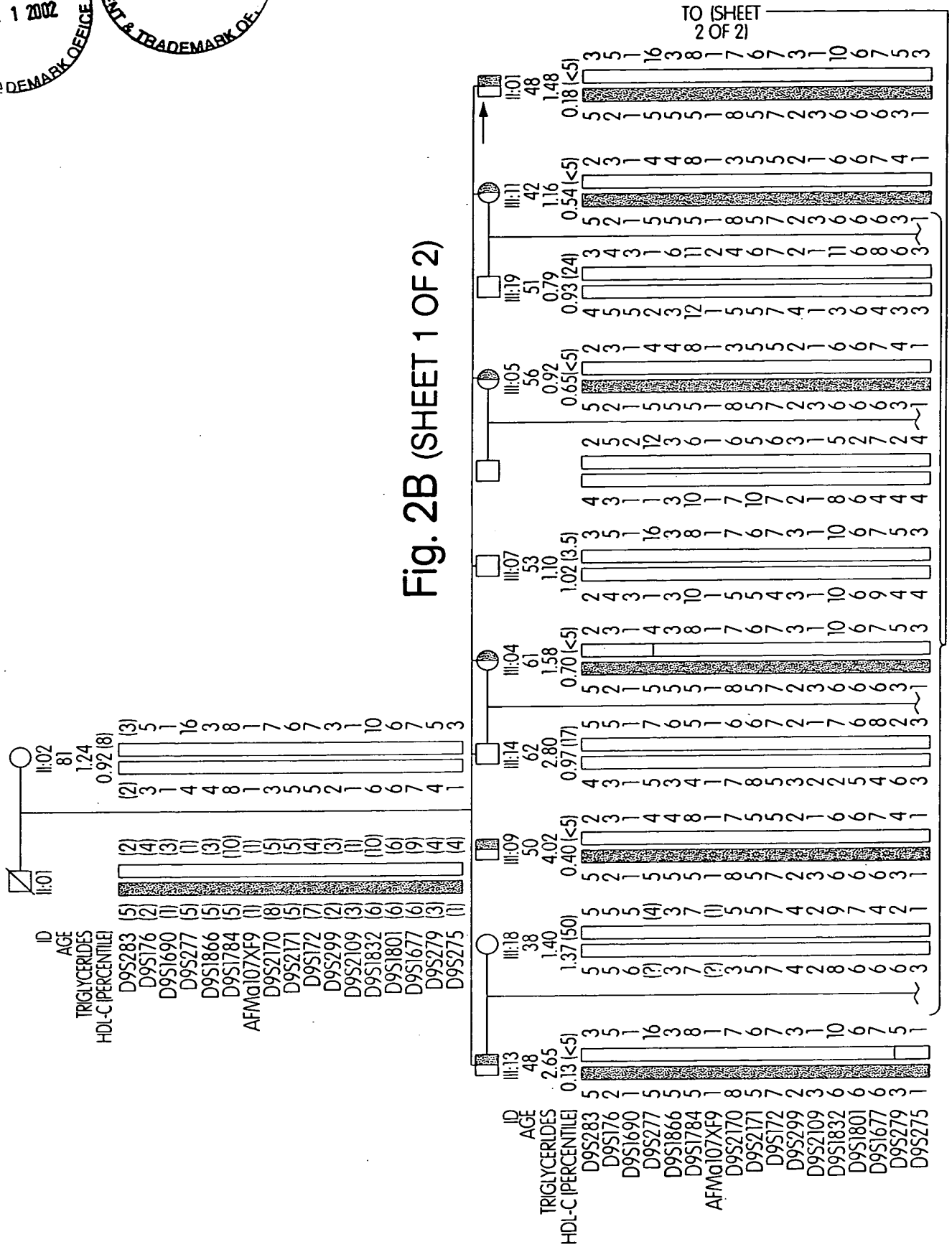

Fig. 2B (SHEET 1 OF 2)

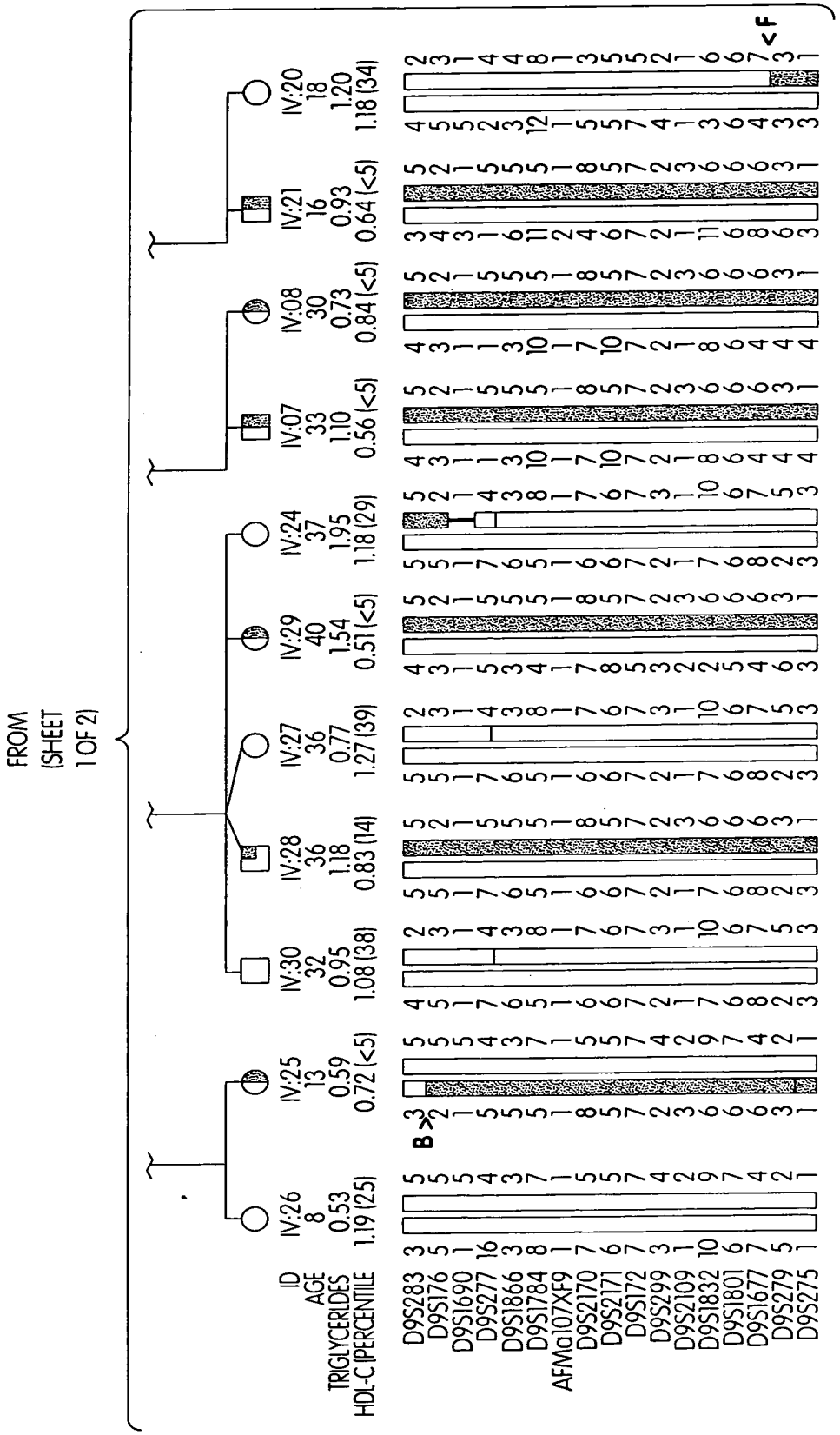

Fig. 2B (SHEET 2 OF 2)

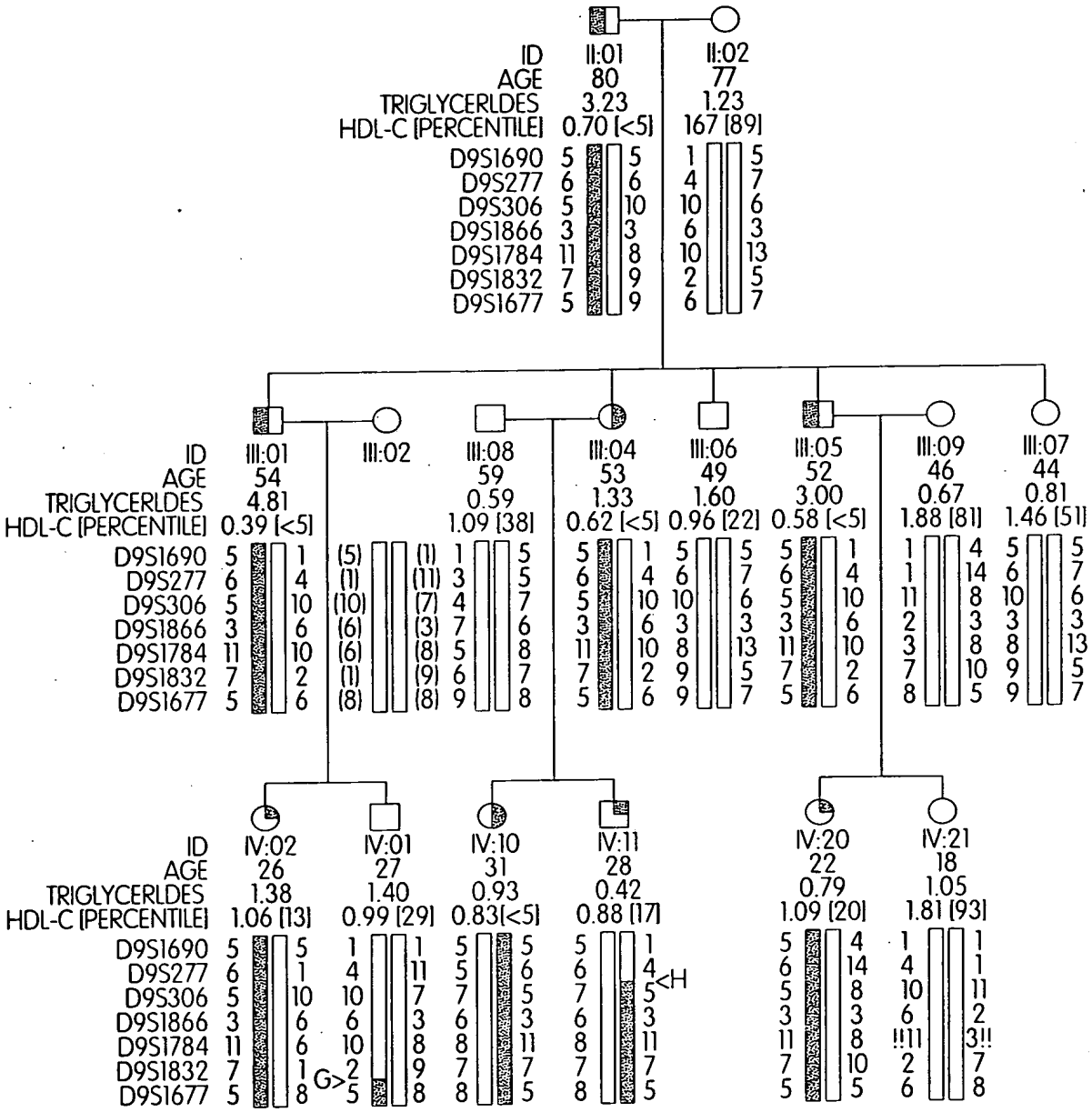

Fig. 2C

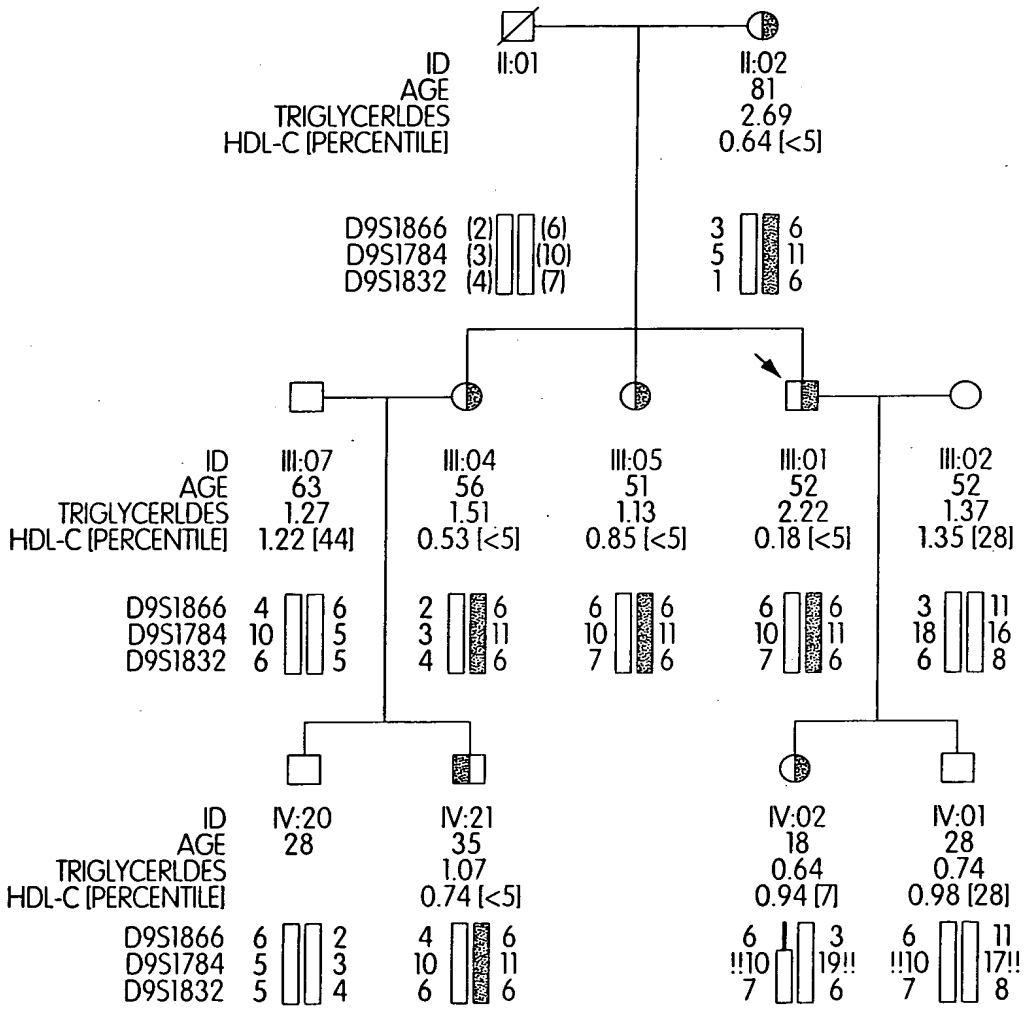

Fig. 2D

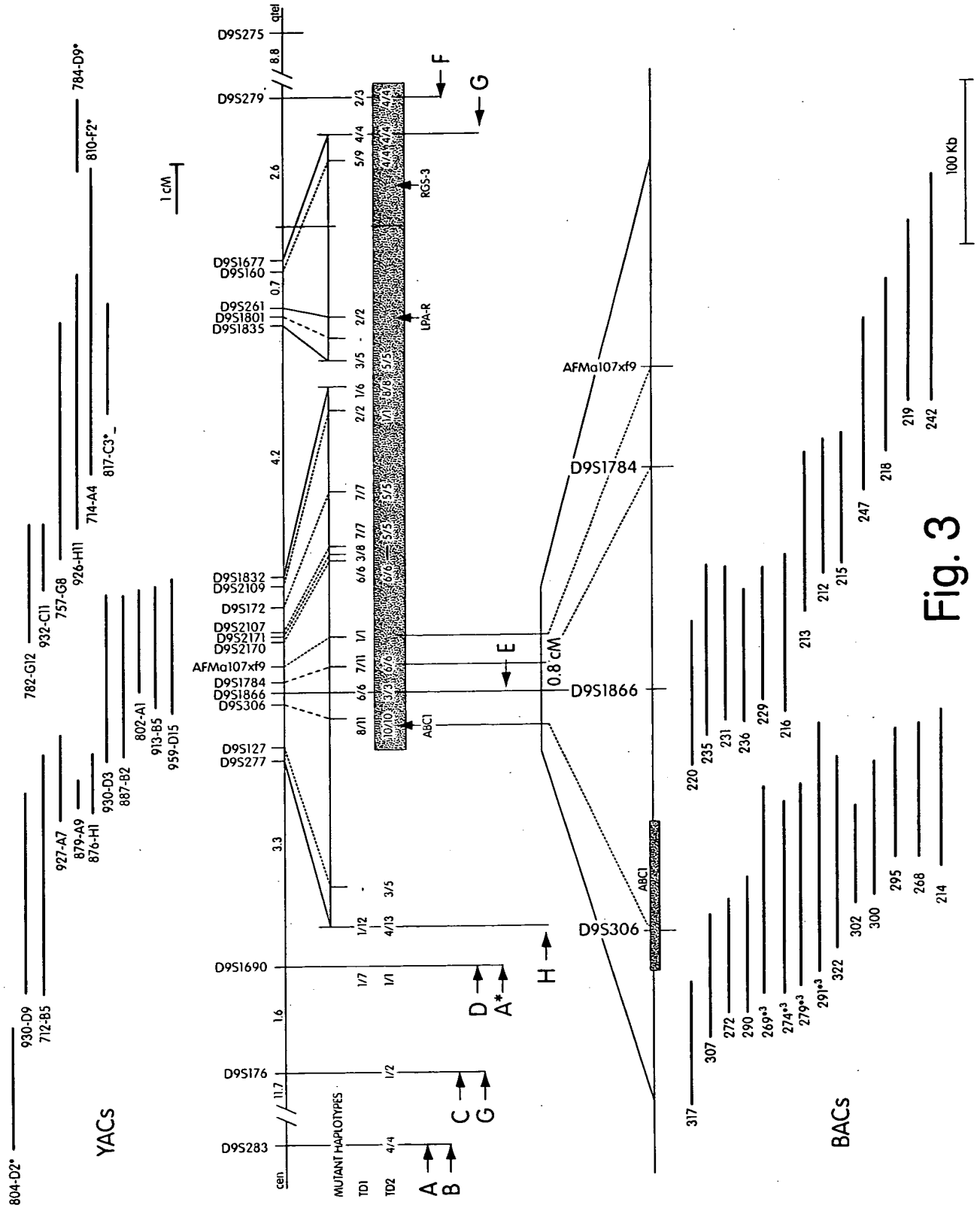

Fig. 3

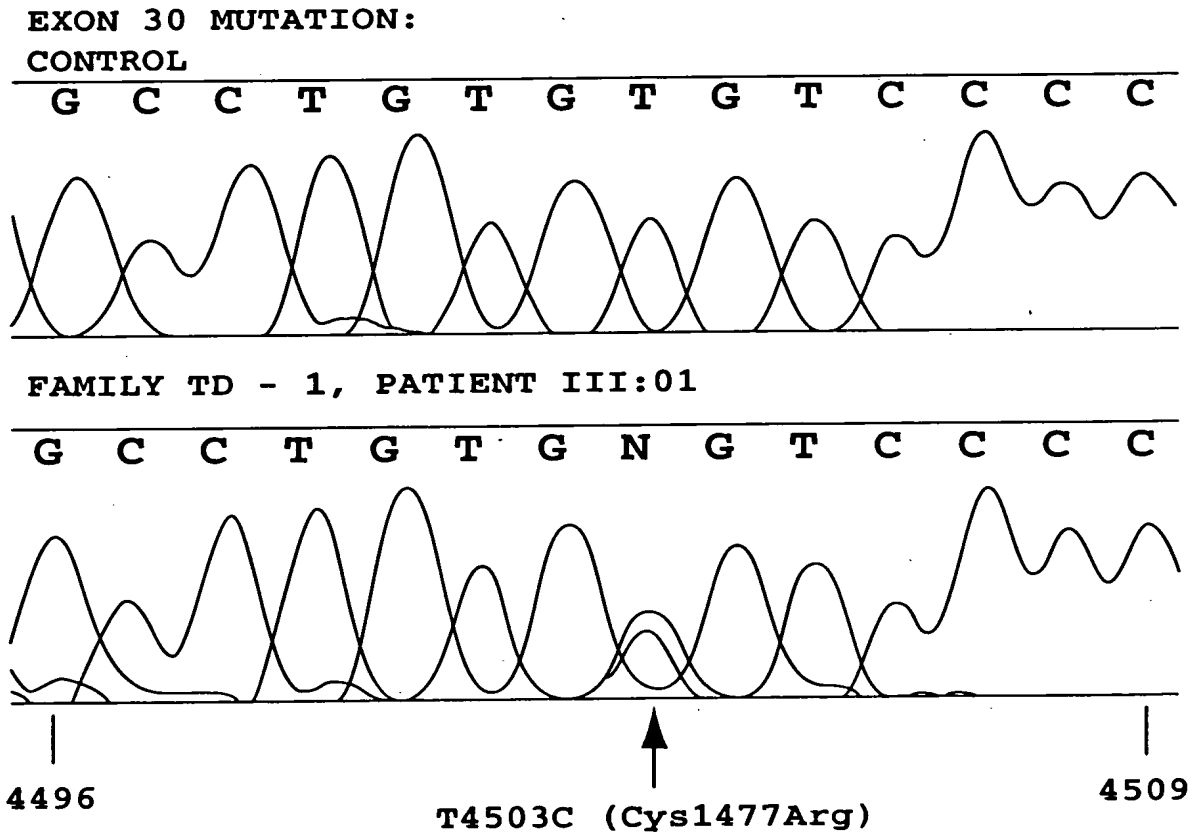

Fig. 4A

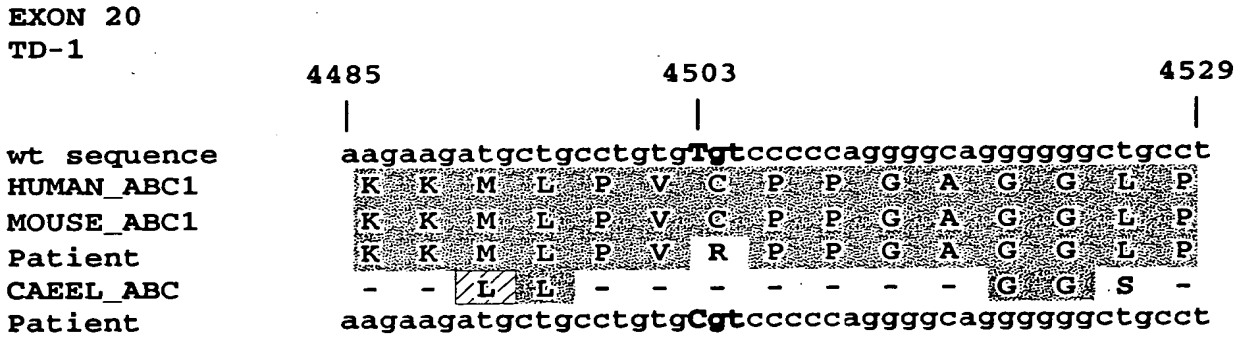

Fig. 4B

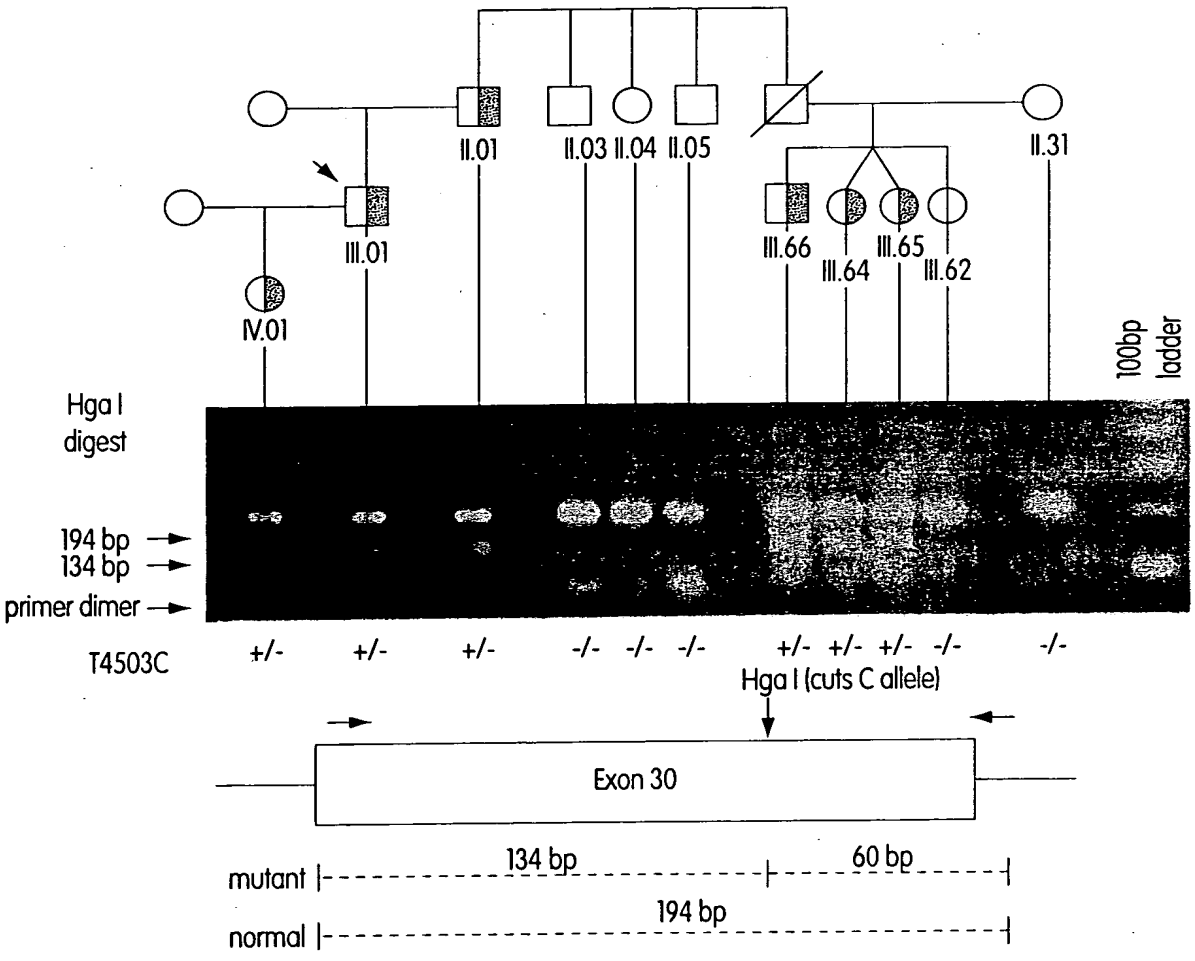

Fig. 4C

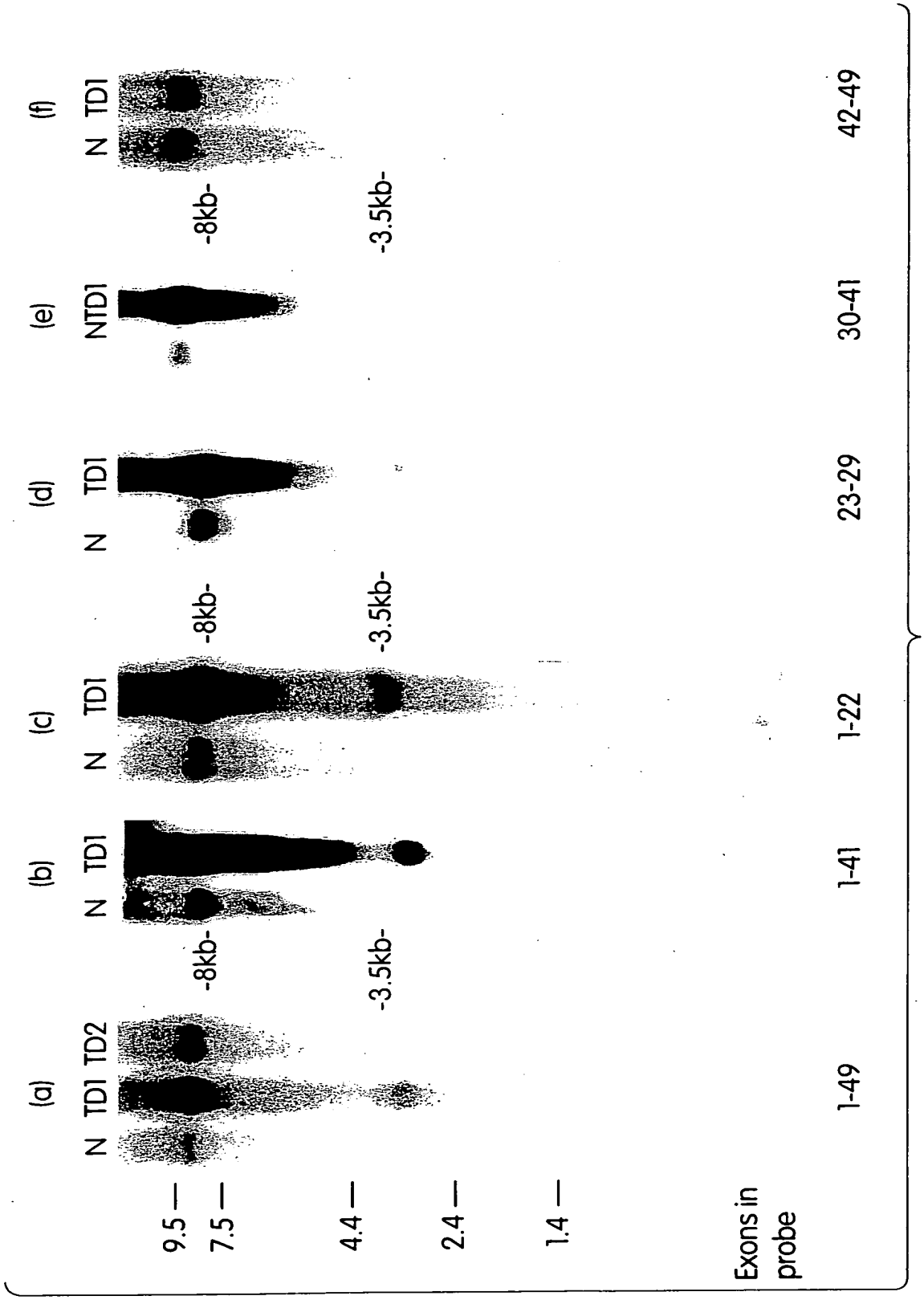

Fig. 4D

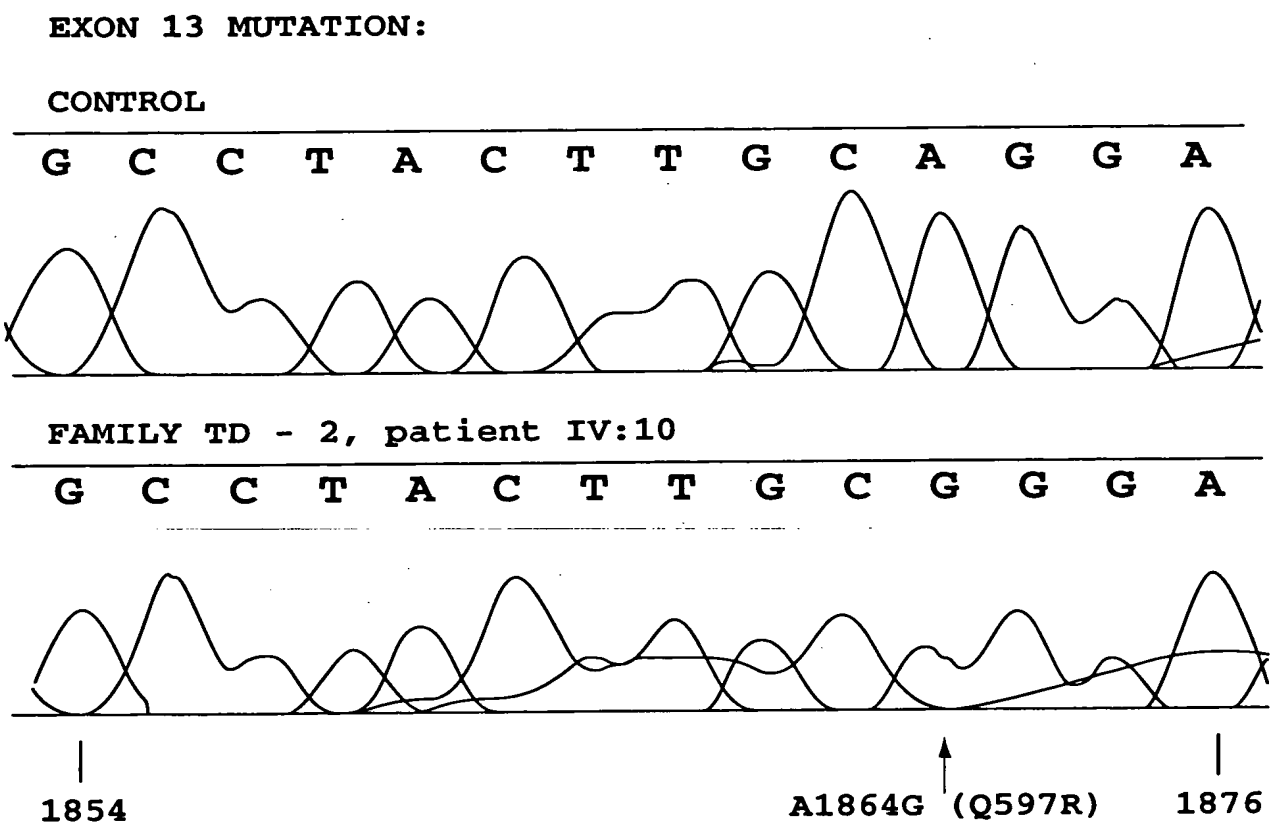

Fig. 5A

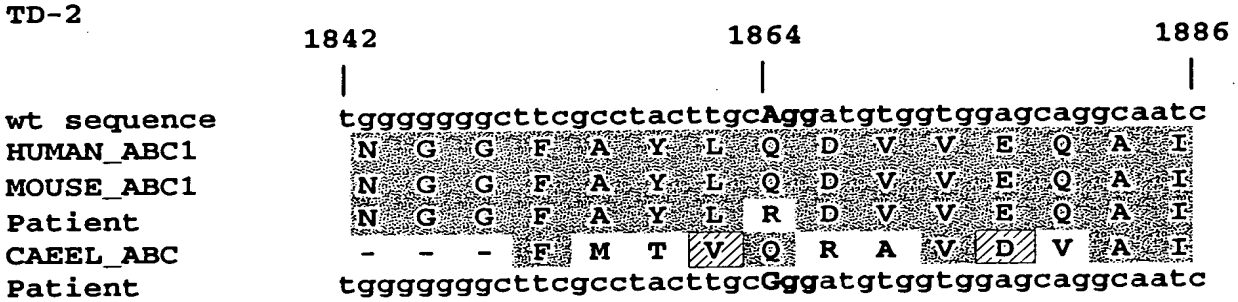

Fig. 5B

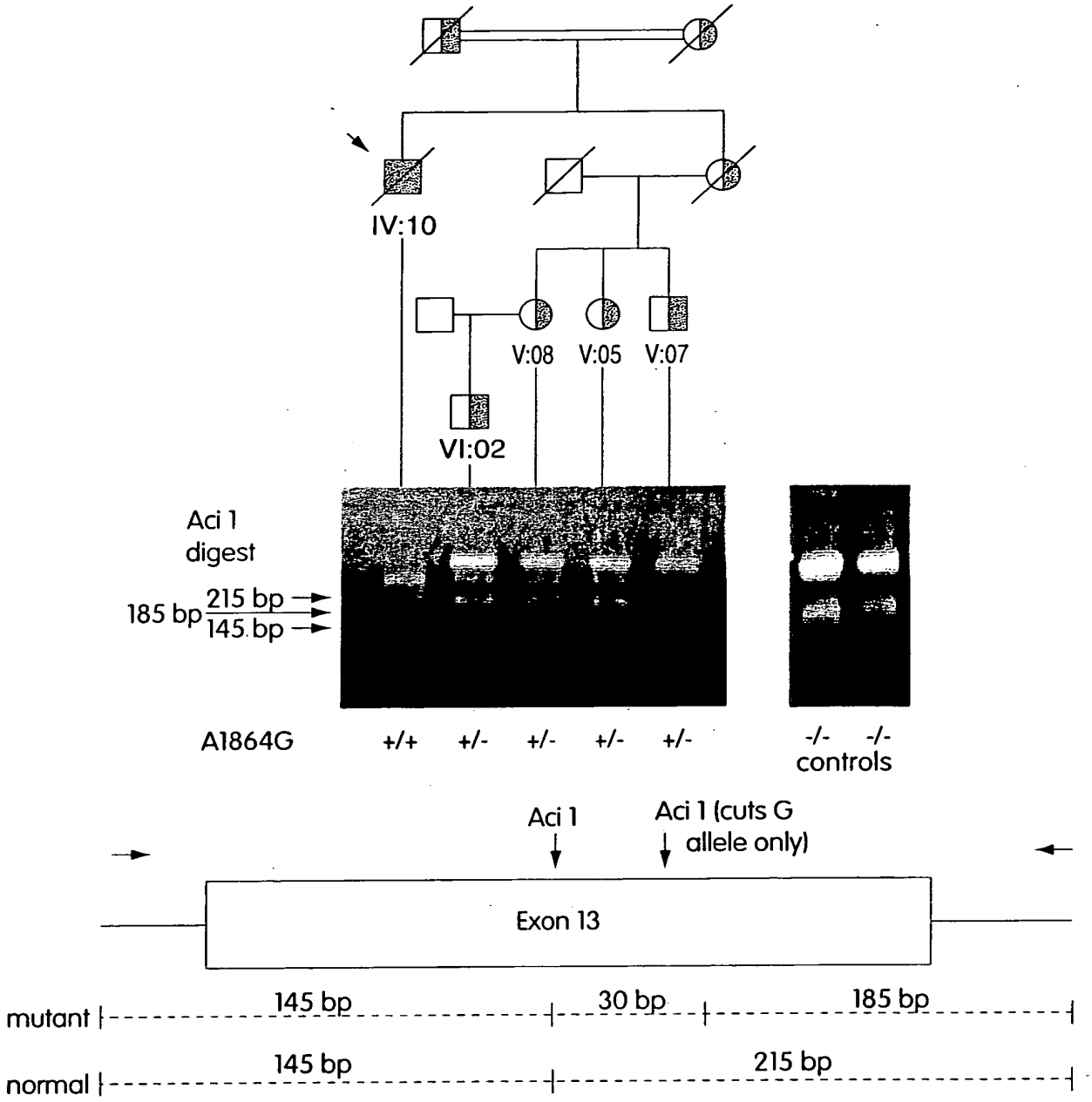

Fig. 5C

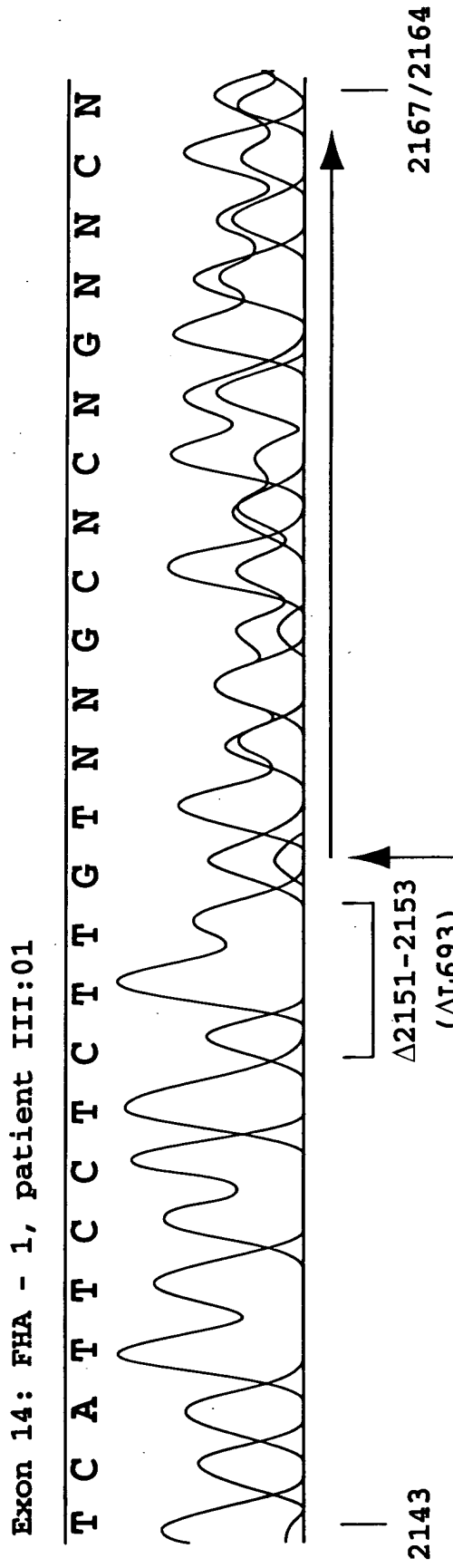

Fig. 6A

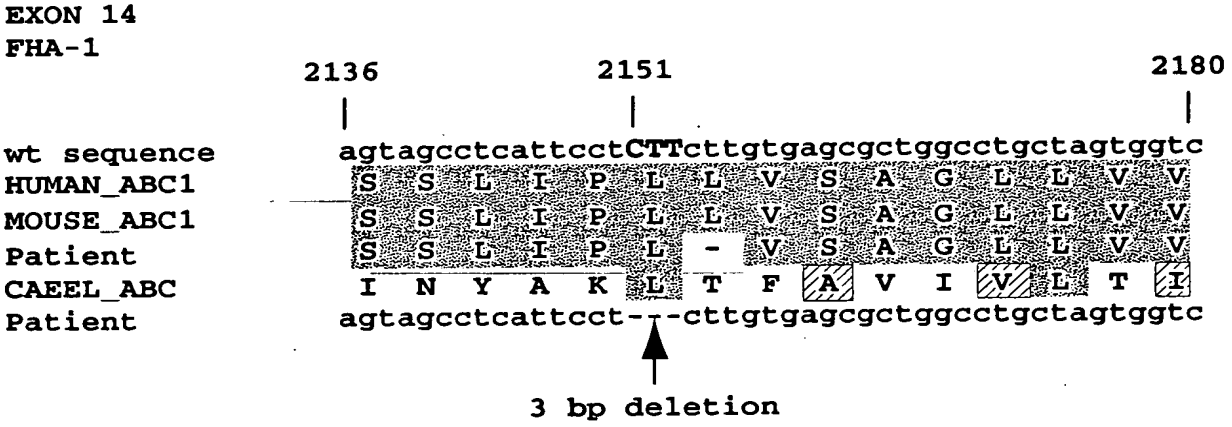

Fig. 6B

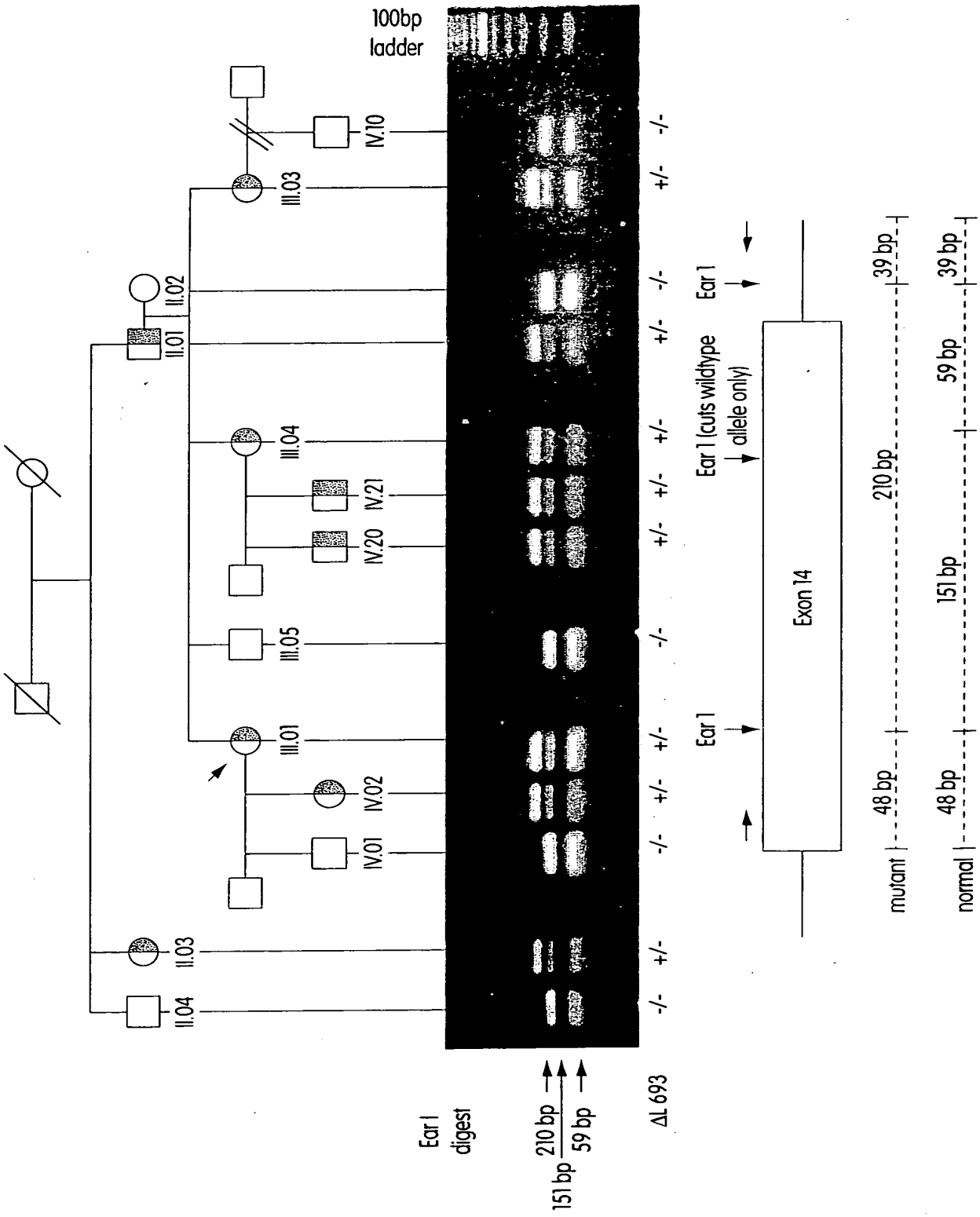

Fig. 6C

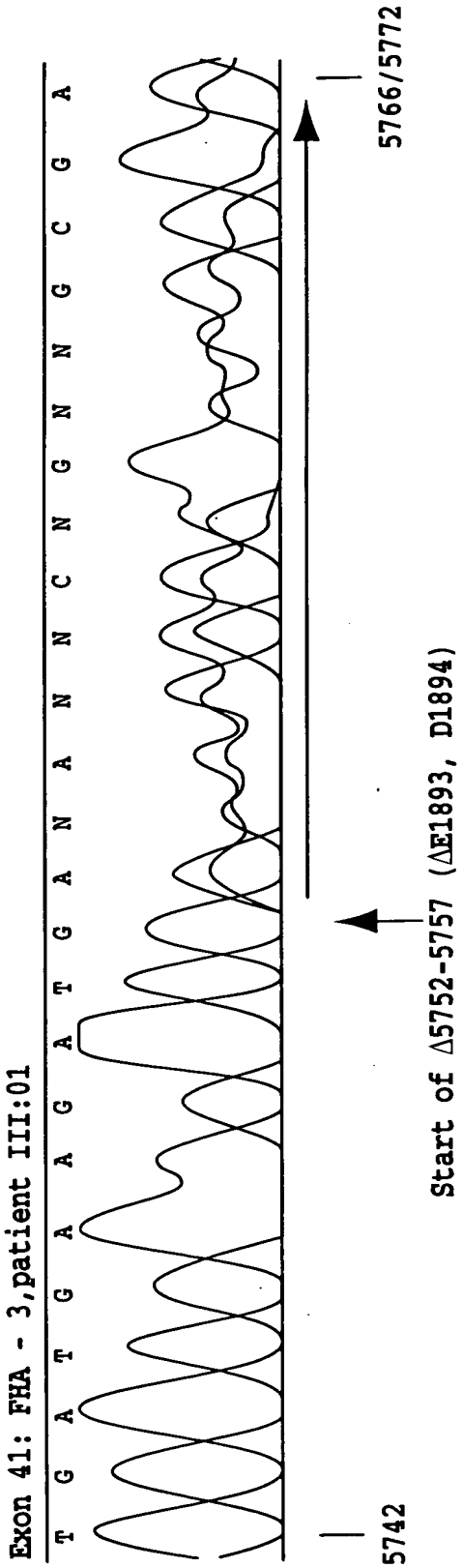

Fig. 6D

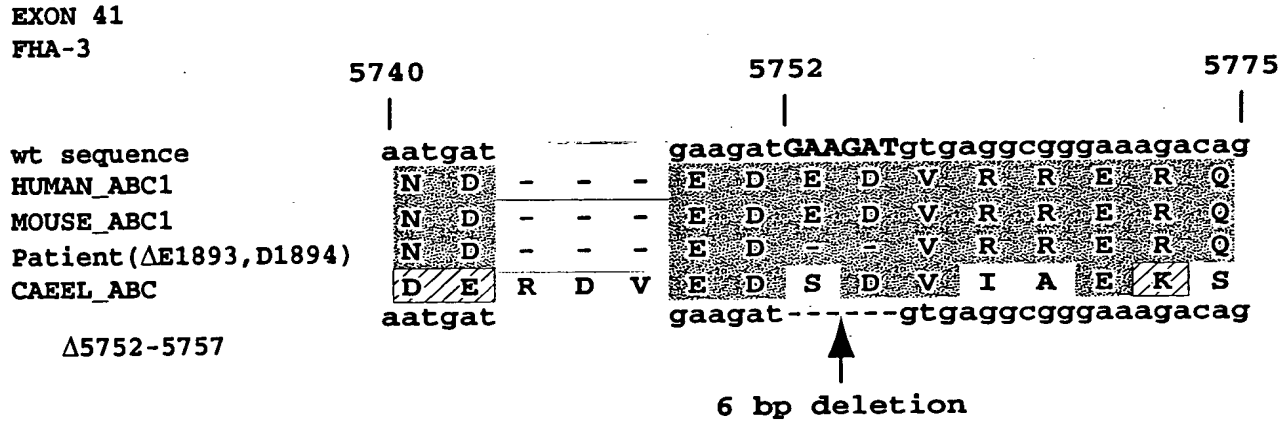

Fig. 6E

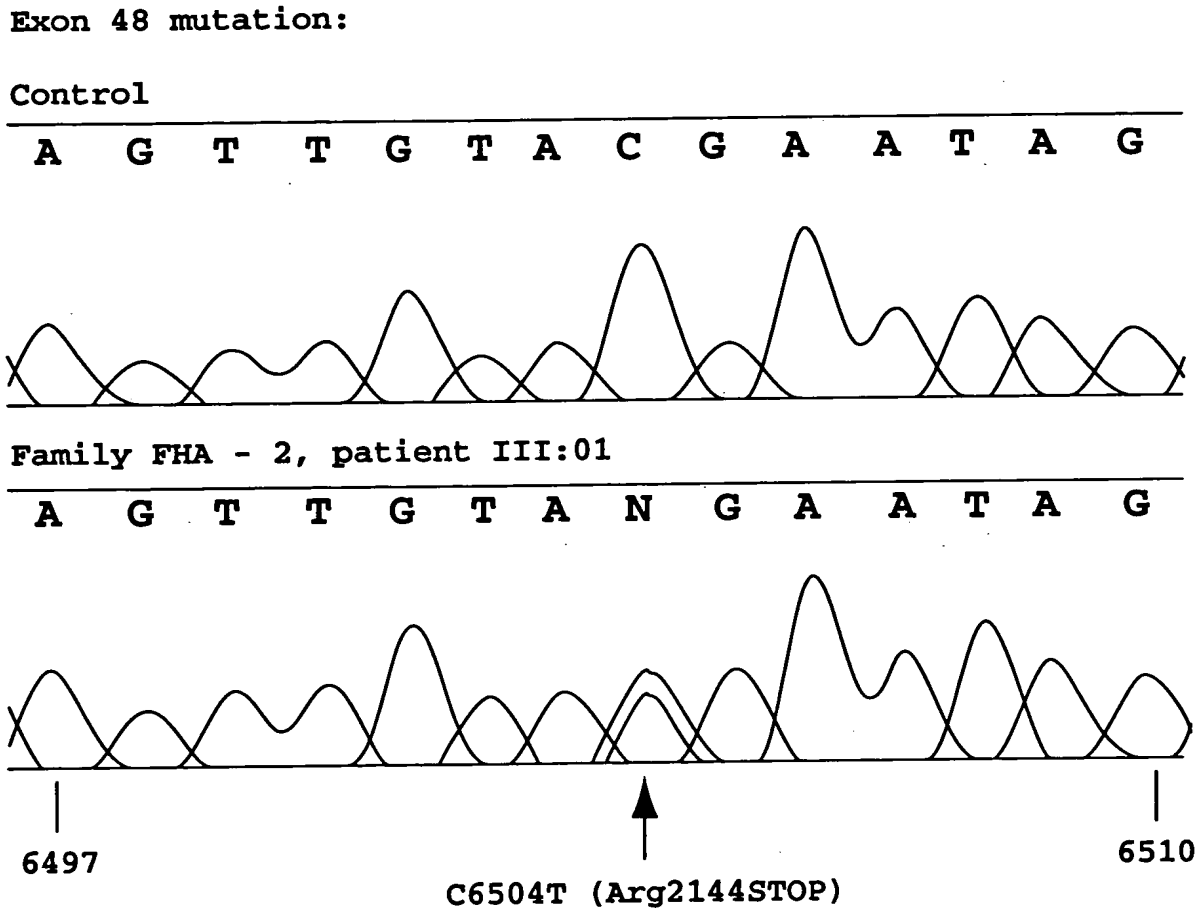

Fig. 6F

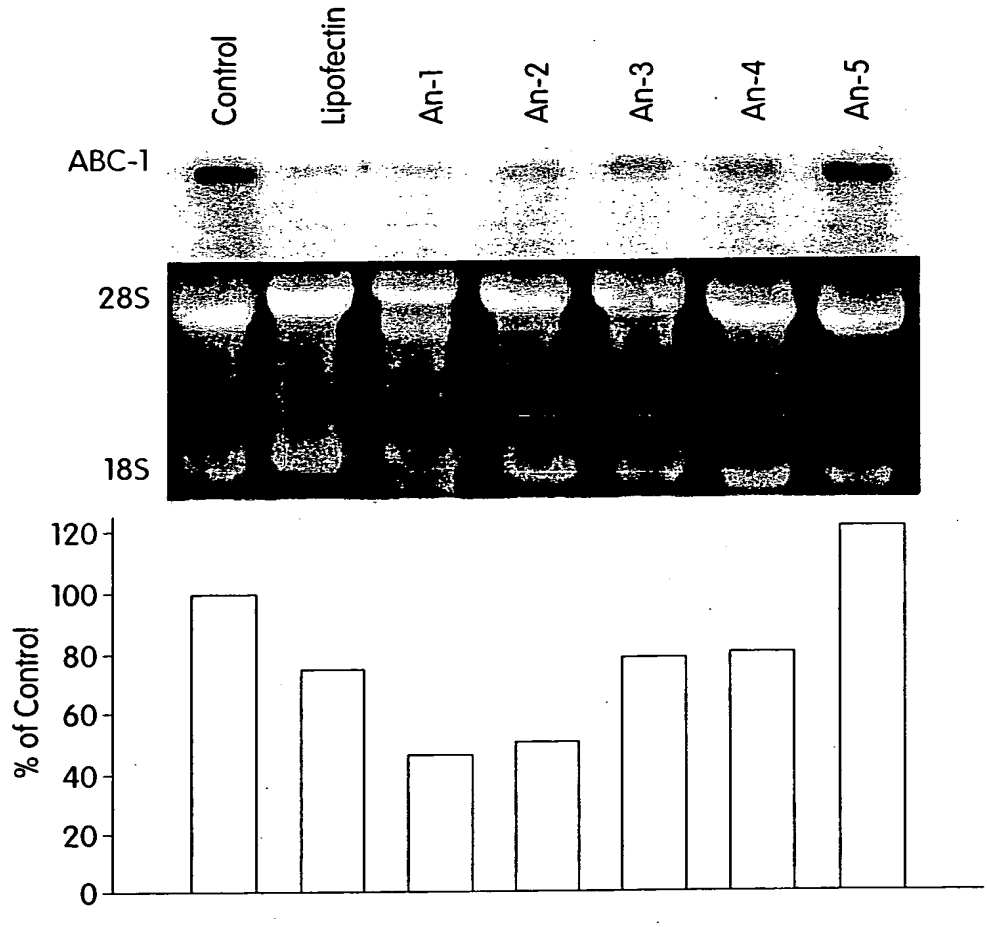

Fig. 7A

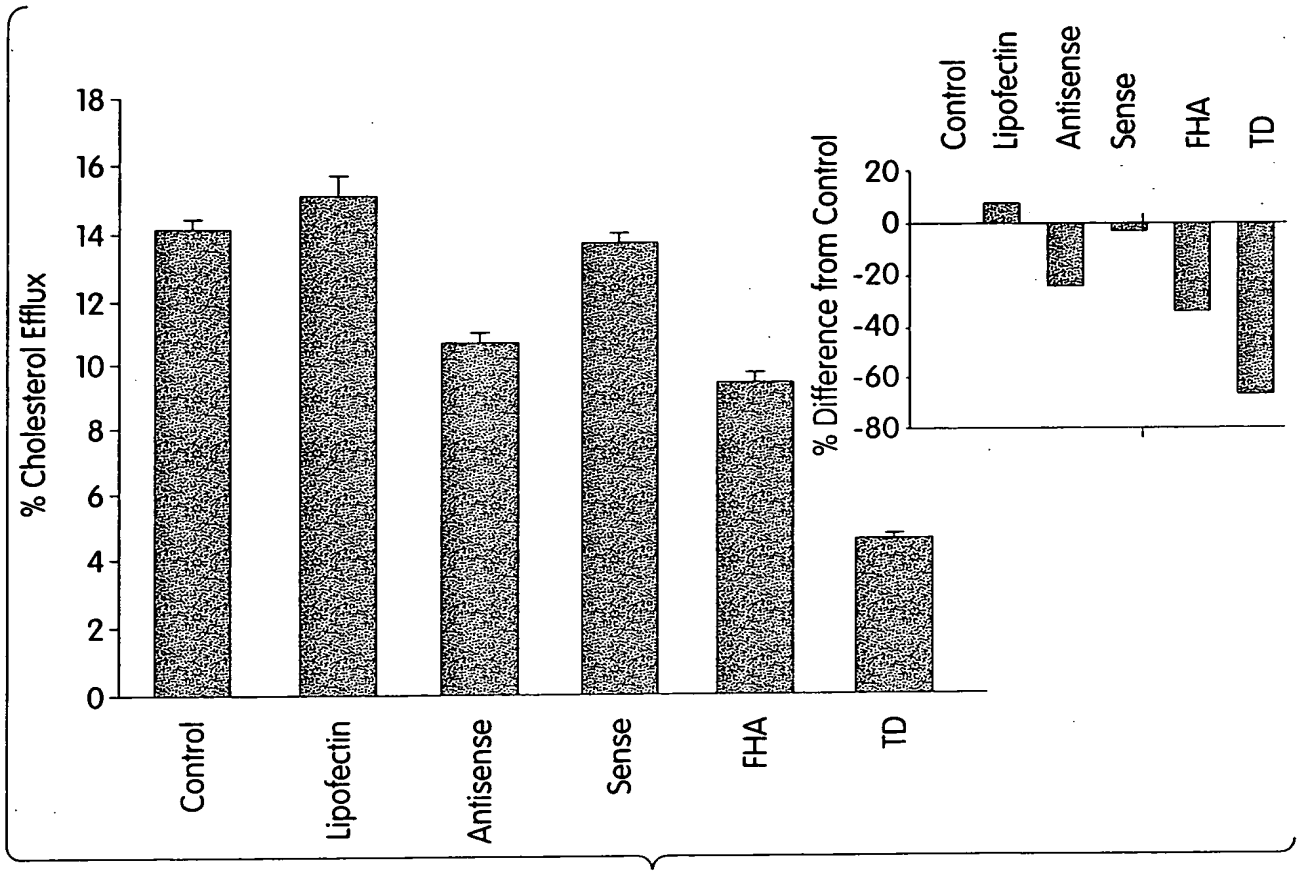

Fig. 7B

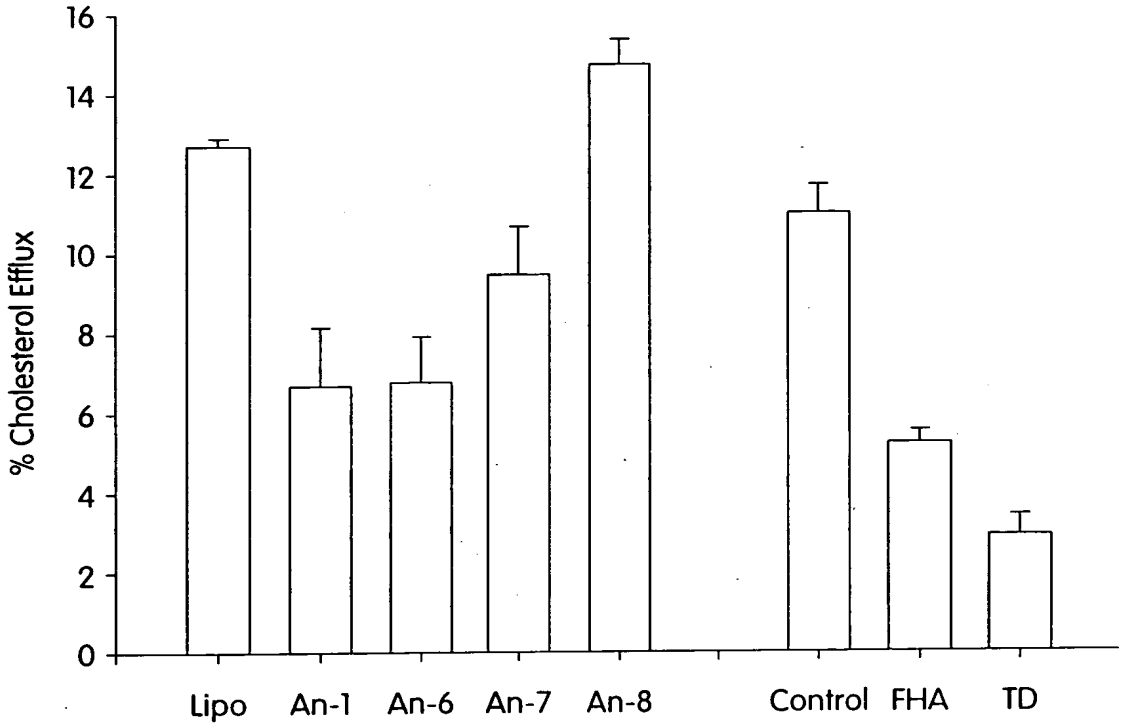

Fig. 7C

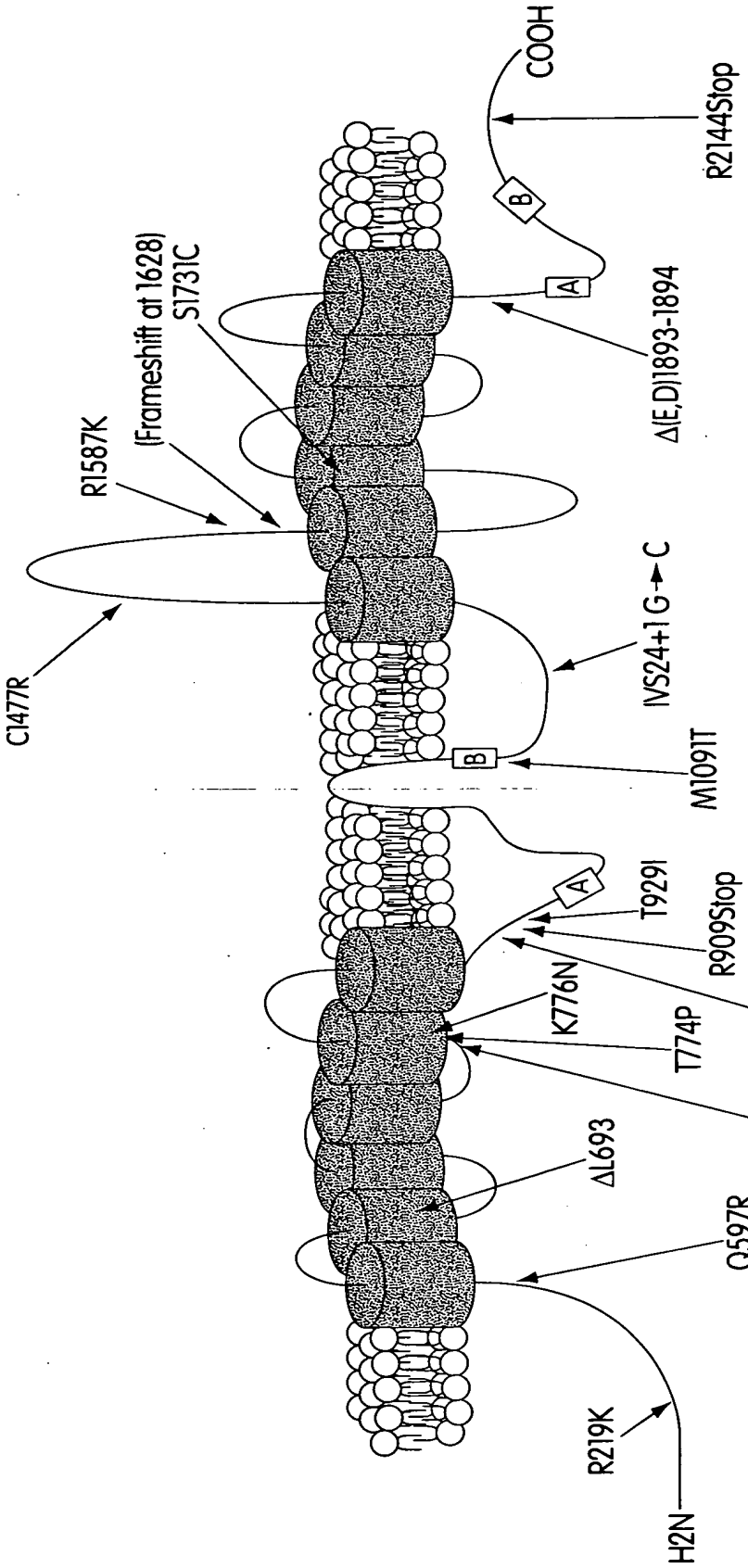

Fig. 8

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Fig. 9A

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Fig. 9B

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Fig. 9C

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TCAAGATGTTAACAGGAGATACCACTGTTACCAGAGGAGATGCTTTCCTTAACAAAAATA

Fig. 9D

GTATCTTATCAAACATCCATGAAGTACATCAGAACATGGGCTACTGCCCTCAGTTTGATG
CCATCACAGAGCTGTTGACTGGGAGAGAACACGTGGAGTTCTTTGCCCTTTTGAGAGGAG
TCCCAGAGAAAGAAGTTGGCAAGGTTGGTGAGTGGGCGATTCGGAAACTGGGCCTCGTGA
AGTATGGAGAAAAATATGCTGGTAACTATAGTGGAGGCAACAAACGCAAGCTCTCTACAG
CCATGGCTTTGATCGGCGGGCCTCCTGTGGTGTTTCTGGATGAACCCACCACAGGCATGG
ATCCCAAAGCCCGGCGGTTCTTGTGGAATTGTGCCCTAAGTGTTGTCAAGGAGGGGAGAT
CAGTAGTGCTTACATCTCATAGTATGGAAGAATGTGAAGCTCTTTGCACTAGGATGGCAA
TCATGGTCAATGGAAGGTTCAGGTGCCTTGGCAGTGTCCAGCATCTAAAAAATAGGTTTG
GAGATGGTTATACAATAGTTGTACGAATAGCAGGGTCCAACCCGGACCTGAAGCCTGTCC
AGGATTTCTTTGGACTTGCATTTCCTGGAAGTGTTCTAAAAGAGAAACACCGGAACATGC
TACAATACCAGCTTCCATCTTCATTATCTTCTCTGGCCAGGATATTCAGCATCCTCTCCC
AGAGCAAAAAGCGACTCCACATAGAAGACTACTCTGTTTCTCAGACAACACTTGACCAAG
TATTTGTGAACTTTGCCAAGGACCAAAGTGATGATGACCACTTAAAAGACCTCTCATTAC
ACAAAAACCAGACAGTAGTGGACGTTGCAGTTCTCACATCTTTTCTACAGGATGAGAAAG
TGAAAGAAAGCTATGTATGAAGAATCCTGTTCATACGGGGTGGCTGAAAGTAAAGAGGAA
CTAGACTTTCCTTTGCACCATGTGAAGTGTTGTGGAGAAAAGAGCCAGAAGTTGATGTGG
GAAGAAGTAAACTGGATACTGTACTGATACTATTCAATGCAATGCAATTCAATGCAATGA
AAACAAAATTCCATTACAGGGGCAGTGCCTTTGTAGCCTATGTCTTGTATGGCTCTCAAG
TGAAAGACTTGAATTTAGTTTTTTACCTATACCTATGTGAAACTCTATTATGGAACCCAA
TGGACATATGGGTTTGAACTCACACTTTTTTTTTTTTTTTTGTTCCTGTGTATTCTCATT
GGGGTTGCAACAATAATTCATCAAGTAATCATGGCCAGCGATTATTGATCAAAATCAAAA
GGTAATGCACATCCTCATTCACTAAGCCATGCCATGCCCAGGAGACTGGTTTCCCGGTGA
CACATCCATTGCTGGCAATGAGTGTGCCAGAGTTATTAGTGCCAAGTTTTTCAGAAAGTT
TGAAGCACCATGGTGTGTCATGCTCACTTTTGTGAAAGCTGCTCTGCTCAGAGTCTATCA
ACATTGAATATCAGTTGACAGAATGGTGCCATGCGTGGCTAACATCCTGCTTTGATTCCC
TCTGATAAGCTGTTCTGGTGGCAGTAACATGCAACAAAAATGTGGGTGTCTCCAGGCACG
GGAAACTTGGTTCCATTGTTATATTGTCCTATGCTTCGAGCCATGGGTCTACAGGGTCAT
CCTTATGAGACTCTTAAATATACTTAGATCCTGGTAAGAGGCAAAGAATCAACAGCCAAA
CTGCTGGGGCTGCAACTGCTGAAGCCAGGGCATGGGATTAAAGAGATTGTGCGTTCAAAC
CTAGGGAAGCCTGTGCCCATTTGTCCTGACTGTCTGCTAACATGGTACACTGCATCTCAA
GATGTTTATCTGACACAAGTGTATTATTTCTGGCTTTTTGAATTAATCTAGAAAATGAAA

Fig. 9E

	Exon (bp)	Forward Primer	SEQ ID No.	Reverse Primer	SEQ ID No.			intron(kb)	intron (kb)
exon 1	140	GGCTGGATTAGCAGTCCTCA	70	ATCCCCAACTCAAAACCACA	119	intron	1	>6.413	>6.4
exon 2	94	GGATTTCCCAGATCCCAGTG	71	AAGTCCAATTTAGCCCACGTT	120	intron	2	>4.241	>4.2
exon 3	142	GACAGACTTGGCATGAAGCA	72	CCAGCCATTCAAAATTCTCC	121	intron	3	>1.248(1.6)	1.6
exon 4	119	GCACTTGGCAGTCACTTCTG	73	GGGTGCAGGTCAATTTCCAAT	122	intron	4	>1.512	>1.5
exon 5	122	CGTTTCTCCACTGTCCCATT	74	CCCCTTCACCACCATTACAA	123	intron	5	>1.796(3)	3
exon 6	177	ACTTCAAGGACCCAGCTTCC	75	TGTCCAAGGAAAAGCCTCAC	124	intron	6	>2.726 (10)	10
exon 7	93	TCGGTTTCTTGTTTGTTAAACTCA	76	AGGACCTCTTGCCAGACTCA	125	intron	7	4.975	5
exon 8	241	TCCCAAGGCTTTGAGATGAC	77	AGGAGATGACACAGGCCAAG	126	intron	8	>2.311(.5)	2.5
exon 9	140	GGCTCCAAAGCCCTTGTAA	78	CGCACACCTCTGAAGCTACC	127	intron	9	0.332	0.3
exon 10	117	GCTGCTGTGATGGGGTATCT	79	ACCTCACTCACACCTGGGAA	128	intron	10	4.208	4.2
exon 11	198	TTTGTAAATTTTGTAGTGCTCCTCA	80	GCCTCCTGCCTGAACCTTAT	129	intron	11	0.747	0.7
exon 12	206	TAGTCAGCCCTTGCCTCCTA	81	CAAAATCATGACACCAAGTTGAG	130	intron	12	0.523	0.5
exon 13	177	AAAGGGGCTTGGTAAGGGTA	82	CATGCACATGCACACACATA	131	intron	13	1.787	1.8
exon 14	223	GATGTGGTGCTCCCTCTAGC	83	CCTTAGCCCGTGTTGAGCTA	132	intron	14	1.747	1.7
exon 15	222	CAAGTGAGTGCTTGGGATTG	84	TGCTTTTATTCAGGGACTCCA	133	intron	15	1.059	1.1
exon 16	205	GCAAATTCAAATTTCTCCAGG	85	CCCATGCACTGCAGAGATTC	134	intron	16	1.105	1.1
exon 17	114	TCAAGGAGGAAATGGACCTG	86	AAGGCAGGAGACATCGCTT	135	intron	17	1.789	1.8
exon 18	172	CTGAAAGTTCAAGCGCAGTG	87	GGGATCAGCATGGTTTCCTA	136	intron	18	0.99	1
exon 19	132	TGCAGACTGAATGGAGCATC	88	GCTTAAGTCCCACTCCTCCC	137	intron	19	1.307	1.3
exon 20	143	GCCAGGGGACACTGTATTCT	89	ATTTTCCTCCGCATGTGTGT	138	intron	20	0.204	0.2
exon 21	138	AGGTCCTCTGCCTTCACTCA	90	TCACAGAAGCCTAGCCATGA	139	intron	21	0.706	0.7
exon 22	221	CCAGTGCTTACCCCTGCTAA	91	AACAGAGCAGGGAGATGGTG	140	intron	22	>0.866(1.7)	1.7
exon 23	73	CACACAACAGAGCTTCTTGGA	92	TCTGCACCTCTCCTCCTCTG	141	intron	23	0.986	1
exon 24	203	ACCTGGAACAGGTGTGGTGT	93	ACTGGGGCCAACATTAATCA	142	intron	24	1.668	1.7
exon 25	49	GGGCTAACATGCCACTCAGTA	94	CTTCCCCATCTGCAACAAAC	143	intron	25	0.196	0.2

Fig. 10 (SHEET 1 OF 2)

exon 26	114	GTTTGTTGCAGATGGGGAAG	95	GCTAAAGGCCATCCAAAGAA	144	intron 26	1.396	1.4
exon 27	149	CACCAGAAGAAGGAGCATGG	96	TCAAGTGCATCTGGGCATAA	145	intron 27	1.649	1.6
exon 28	125	CTGGACTCGTAGGGATTTGC	97	TCTGAAGTCCATTCCCTTGG	146	intron 28	>0.728(1.4)	1.4
exon 29	99	GCCTGTCACAGAGAAATGCTT	98	CAATGTGGCATGCAGTTGAT	147	intron 29	>2.589(3)	3
exon 30	190	TTACGGAATGATCCTGTGCTC	99	GAAGCTACCAGCCCATCCT	148	intron 30	1.521	1.5
exon 31	95	AGTCAGGTTTCCGGTCACAC	100	CATTTCCCCCACTGTTTCAG	149	intron 31	>0.944(\)	>0.9
exon 32	33	CCGTTCCTTATATCCTCAGGTG	101	CCAAGGCTTTCTTCAATCCA	150	intron 32	>1.062(/6.5)	>1.0
exon 33	106	CCTTGTACACACTCGCACTGA	102	GATCCGTTTAACCTGCCAAC	151	intron 33	1.475	1.5
exon 34	75	TGTTGTCCACAGGTTCCAGA	103	ATGCCCCTGCCAACTTTAC	152	intron 34	0.522	0.5
exon 35	170	TGAGGTTTATGGGCATGGTT	104	CTCTGCAGCTGTTCCCCTAC	153	intron 35	1.228	1.2
exon 36	178	ATGTTTTTCCTTGGCTGTGC	105	TATCAATCCATGGCCCTGAC	154	intron 36	>1.898(2)	2
exon 37	116	ATCTGCCCTTTCTTGTCTGA	106	AGAGTCCCTGCCCTCCTTCT	155	intron 37	0.112	0.1
exon 38	145	AGGGAGCTGCACAGTGGATA	107	AAGGCAGTCAGCAGTGTCAA	156	intron 38	1.545	1.5
exon 39	124	TCACTCCCATATTTCAGAACTTGA	108	GGGGAACATCCTGTGCTTAG	157	intron 39	1.087	1.1
exon 40	130	TGTTTATTGGAAGATCGGTGAA	109	CCATTGGTGAGTGTTTCCCT	158	intron 40	0.265	0.3
exon 41	121	CGTTAGAGACTGAATCTTTGTCCTG	110	AGTCAGCAAACTGCTGGGTT	159	intron 41	>0.622(0.9)	0.9
exon 42	63	AGTCCTGCCTTCCACAGTTG	111	ATTGCTCCATCCTGGCATAA	160	intron 42	0.909	0.9
exon 43	107	GGTAGTTACGTGTTAGGGGCA	112	TCATGGATGATTTTATGTGCTTC	161	intron 43	2.355	2.4
exon 44	142	CAGGAACATTAGGCCAGATTG	113	GCGTGTGGAAAAGCCATAAG	162	intron 44	0.372	0.4
exon 45	135	CATGTATGTGTAGGACAGCATGA	114	GCCAATCATACAACAGCCCT	163	intron 45	>1.059(1.3)	1.3
exon 46	104	CTGTTTCAAAGATGCTTCTGC	115	TGATCGCATATTCTACTTGGAAA	164	intron 46	0.483	0.5
exon 47	93	CCTAGGAAGCTGGAATGCTG	116	TCCCTTTATTTTAGAGGCACCA	165	intron 47	0.659	0.7
exon 48	244	GGGTTCCCAGGGTTCAGTAT	117	GATCAGGAATTCAAGCACCAA	166	intron 48	0.941	0.9
exon 49	295	CTTGACCTAATTTCAACATCTGG	118	TGGGTTCCATAATAGAGTTTCACA	167		>1.075	

Fig. 10 (SHEET 2 OF 2)

ERRORS IN PUBLIC SEQUENCE (differences between samples and Genbank entry AJ012376.1):					
Exon/Inrton	Nucleotides	Amino Acid Change		Sequence difference/context	SEQ ID NO:
2	T150C A152G	no change	Public sequence: Correct sequence:	TGTCAGCTGTTACTGGAAGTGG TGTCAGCTGCTGCTGGAAGTGG	168 169
7	C839T	no change	Public sequence: Correct sequence:	AGGAGCTGGCCGAAGCCACAA AGGAGCTGGCTGAAGCCACAA	170 171
33	C4738T	T1495I	Public sequence: Correct sequence:	AATGATGCCACCAAACAAATG AATGATGCCATCAAACAAATG	172 173
35	C5017T	P1588L	Public sequence: Correct sequence:	GAGGTGGCTCCGATGACCACA GAGGTGGCTCTGATGACCACA	174 175
43	G5995A	R1914K	Public sequence: Correct sequence:	TTCCTTAACAGAAATAGTATC TTCCTTAACAAAAATAGTATC	176 177
48	C6577T	P2108L	Public sequence: Correct sequence:	GGAAGTGTTCCAAAAGAGAAA GGAAGTGTTCTAAAAGAGAAA	178 179
49	G6899A	not applicable	Public sequence: Correct sequence:	AGTAAAGAGGGACTAGACTTT AGTAAAGAGGAACTAGACTTT	180 181
Mutations:					SEQ ID NO:
13	A1864G	Q597R	More common: Less common:	GCCTACTTGCAGGATGTGGTG GCCTACTTGCGGGATGTGGTG	182 183
14	delta CTT 2151-3	deltaL093	More common: Less common:	CCTCATTCCTCTTCTTGTGAGCG CCTCATTCCT/CTTGTGAGCG	184 185
15	G2385A	V771M	More common: Less common:	GCAGGACTACGTGGGCTTCAC GCAGGACTACATGGGCTTCAC	186 187
18	C2799T	R909Stop	More common: Less common:	AAAAGTCTACCGAGATGGGAT AAAAGTCTACTGAGATGGGAT	188 189
18	C2860T	T929I	More common: Less common:	GGCCAGATCACCTCCTTCCTG GGCCAGATCATCTCCTTCCTG	190 191
22	T3346C	M1091T	More common: Less common:	ACACACCACATGGATGAAGCG ACACACCACACGGATGAAGCG	192 193

Fig. 11 (SHEET 1 OF 4)

Intron 24	(+1) G to C splice donor site	Altered transcript lenght	More common: Less common:	CCTGGAAGAAGTAAGTTAAGT CCTGGAAGAACTAAGTTAAGT	194 195
30	T4503C	C1477R	More common: Less common:	GCTGCCTGTGTGTCCCCCAGG GCTGCCTGTGCGTCCCCCAGG	196 197
35	GG 4958-57 to C	frameshift at aa 1628	More common: Less common:	TAGCCATTATGGAATTACTGCT TAGCCATTATCAATTACTGCT	198 199
41	delta AAGATG 5752-7	delta(E.D)1893-1894	More common: Less common:	GATGAAGATGAAGATGTGAGGCGGGA GATGAAGATG/TGAGGCGGGA	200 201
48	C6504T	R2144Stop	More common: Less common:	AATAGTTGTACGAATAGCAGG AATAGTTGTATGAATAGCAGG	202 203
Promoter Variants:					
Location	Position Relative to Xenon cDNA	Position Realitive to SEQ ID NO: 14 Containing Exon 1			SEQ ID NO:
1	G57C	8216	More common: Less common:	ACACGCTGGGGGTGCTGGCTG ACACGCTGGGGGTGCTGGCTG	204 205
5	(-)4 ins. G	8158	More common: Less common:	GACCAGCCACGGCGTCCCTG GACCAGCCACGGGCGTCCCTG	206 207
5	A (-)380 G	7780	More common: Less common:	CATTTTCTTAGAAAAGAGAGGT CATTTTCTTAGAGAAGAGAGGT	208 209
5	A (-)479 C	7681	More common: Less common:	GAAAATTAGTATGTAAGGAAG GAAAATTAGTCTGTAAGGAAG	210 211
5	A (-)738 G	7422	More common: Less common:	CCTCCGCCTGCCAGGTTCAGCGATT CCTCCGCCTGCCGGGTTCAGCGATT	212 213
5	A (-)1045 G	7115	More common: Less common:	TATGTGCTGACCATGGGAGCTTGTT TATGTGCTGACCGTGGGAGCTTGTT	214 215
5	A (-)1113 G	7047	More common: Less common:	GTGACACCCAACGGAGTAGGG GTGACACCGAGCGGAGTAGGG	216 217
5	(-)1181 ins. CCCT	6979	More common: Less common:	AGTATCCCT/TGTTCACGAGAA AGTATCCCTCCCTTGTTCACGAGAA	218 219

Fig. 11 (SHEET 2 OF 4)

Serial No.: 09/526,193
Applicant: Hayden et al
Filed: 15 March 2000
Attorney Docket: 760050-19

Polymorphisms:

Exon/Inrton	Nucleotides	Amino Acid Change		Sequence difference/context	SEQ ID NO:
5	G548A	no change	More common:	CTGGGTTCCTGTATCACAACC	220
			Less common:	CTGGGTTCCTATATCACAACC	221
6	G730A	R219K	More common:	GGCCTACCAAGGGAGAAACTG	222
			Less common:	GGCCTACCAAAGGAGAAACTG	223
Intron 7	G(+)2383 T	Not applicable	Allele 1:	TTTAAAGGGGGTGATTAGGA	224
			Allele 2:	TTTAAAGGGGTTGATTAGGA	225
Intron 7	G(+)3035 T	Not applicable	Allele 1:	GAAGAATTTGTTTTTTTGATT	226
			Allele 2:	GAAGAATTTTTTTTTTTGATT	227
8	C1010T	no change	More common:	GCGGGCATCCCGAGGGAGGGG	228
			Less common:	GCGGGCATCCTGAGGGAGGGG	229
8	G1022A	no change	More common:	AGGGAGGGGGGCTGAAGATCA	230
			Less common:	AGGGAGGGGGACTGAAGATCA	231
Intron 9	(-)42 ins. G	Not applicable	More common:	AGGAGCCAAACGCTCATTGT	232
			Less common:	AGGAGCCAAAGCGCTCATTGT	233
Intron 13	T(+)24 A	Not applicable	More common:	AAGCCACTGTTTTTAACCAGT	234
			Less common:	AAGCCACTGTATTTAACCAGT	235
15	A2394C	T774P	More common:	CGTGGGCTTCACACTCAAGAT	236
			Less common:	CGTGGGCTTCCCACTCAAGAT	237
15	G2402C	K776N	More common:	TCACACTCAAGATCTTCGCTG	238
			Less common:	TCACACTCAACATCTTCGCTG	239
Intron 14	C(+)16 T	Not applicable	Allele 1:	GCAGCCTCACCCGCTCTTCCC	240
			Allele 2:	GCAGCCTCACTCGCTCTTCCC	241
17	A2723G	I883M	Allele 1:	AGAAGAGAATATCAGAAATCT	242
			Allele 2:	AGAAGAGAATGTCAGAAATCT	243
Intron 17	C(+)2000 G	Not applicable	Allele 1:	GCGCAGTGCCCTGTGTCCTTA	244
			Allele 2:	GCGCAGTGCGCTGTGTCCTTA	245

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21	T3233G	no change	More common:	GATCTAAGGTTGTCATTCTGG	246
			Less common:	GATCTAAGGTGGTCATTCTGG	247
Intron 21	G(+)118 T	Not applicable	Allele 1:	CTCTTCTGTTAGGACAGAAGAGA	248
			Allele 2:	CTCTTCTGTTATCACAGAAGAGA	249
Intron 21	A(+)563 G	Not applicable	Allele 1:	CATTCTAGGGATCATAGCCAT	250
			Allele 2:	CATTCTAGGGGTCATAGCCAT	251
Intron 24	G(+)321 T	Not applicable	Allele 1:	AAGTACAGTGGGAGGAACAGCG	252
			Allele 2:	AAGTACAGTGTGAGGAACAGCG	253
Intron 29	A(-)624 G	Not applicable	Allele 1:	AATTCCTAAAAATAGAAATGCA	254
			Allele 2:	ATTCCTAAAAAGTAGAAATGCA	255
Intron 31	T(+)30 C	Not applicable	More common:	GGCCCCTGCCTTATTATTACT	256
			Less common:	GGCCCCTGCCGTATTATTACT	257
Intron 33	A(+)732 G	Not applicable	Allele 1:	TGAGAGAATTACTTGAACCCGG	258
			Allele 2:	TGAGAGAATTGCTTGAACCCGG	259
Intron 33	C(+)898 T	Not applicable	Allele 1:	TTTGCTGAAACAATCACTGCA	260
			Allele 2:	TTTGCTGAAATAATCACTGAC	261
Intron 34	C(+) 234 T	Not applicable	Allele 1:	AACCTCAGTTCCCTCATCTGTG	262
			Allele 2:	AACCTCAGTTTCCTCATCTGTG	263
34	G4834A	R158TK	More common:	CTGGACACCAGAAATAATGTC	264
			Less common:	CTGGACACCAAAAATAATGTC	265
37	C 5266G	S1731C	More common:	TCCTATGTGTCCTCCACCAAT	266
			Less common:	TCCTATGTGTGCTCCACCAAT	267
Intron 43	T(+)18 C	Not applicable	More common:	AAGAAGTGGCTTGTATTTTGC	268
			Less common:	AAGAAGTGGCCTGTATTTTGC	269
Intron 43	C(+)1665 G	Not applicable	Allele 1:	AACTGATTTGATTGGTATAGCTG	270
			Allele 2:	AACTGATTTGGTTGGTATAGCTG	271
48	C6521T	no change	More common:	CAGGGTCCAACCCGGACCTGA	272
			Less common:	CAGGGTCCAATCCGGACCTGA	273
Intron 10	(+)14 ins. T	Not applicable	More common:	GCGTCAGGGATGGGGACAG	284
			Less common:	GCGTCAGGGATTGGGGACAG	285
Exon 16	G2547A	V8251	More common:	CCACTTCGGTCTCCATG	286
			Less common:	CCACTTCGATCTCCATG	287
Polymorphism in an ABC1 BAC contig; This polymorphism is within approximatey 200kb of the ABC1 gene					SEQ ID NO:
	A or G	Not applicable	Allele 1:	TTGGGAGGCTAAGGCAGGAGAA	274
			Allele 2:	TTGGGAGGCTGAGGCAGGAGAA	275

Fig. 11 (SHEET 4 OF 4)

Genomic contig containing ABC1 exon 1:
Underline = putitive promotor element

acctcttatagaatgatagaattcctctggaatgattggataacttcatttcatccttgacttttaccttggaggattt
cttaccccttttggcttctcaaatttgactattaaaatgttgcctttaaaaataggaacacagtttcaggggggagtac
cagcccatgacccttctgcaaggccccctaactcaaggtagtttccctggaactgtggtttatggaatgtttcaggagt
gtgaggaggtataatttaaggctgtcctagcaaggataccttaaggatagagggcccagtagcatctggaggccagaa
aagttaaactgaggcagtcagattagcttcaggctcaattaagctgatgggtcagcctgggagaaattgcaggatgact
ctcaatatcccctcccacccccacagcagccacgatctgtctgtctttaatcatgggtgcagtgaacctgttctttcca
ggtgtcttggccttcagtaaccttgttaggcttgtccctgaacgtggctaccgatccaaagacacatgatcagagaggc
aattagagaacagacctttccaaagcaagcatgttctgttgggcttagaagtttcatgtcctaatattataggaccct
gtgcatctctctggagatgaggcacatgagtcatatctgtgattcttgcttttgtgtcaacatctcatgaataggcaat
cagagctttggcaccaatgtattttcagttcatatctgatgtagttaaatccacctcctgctttgtagtttactggcaa
gctgtttttgatataagacatctagaacactgtaaatatataacatttttatttgtctattatacctcaattacgaaaa
agacatctagaagcaacctcatcaagagagatactgaggccgggcatggtagctcacacttgcaatcccattactttgg
gaggctgaggcaggtagatcacttgaggtcaagagtttgaaaccagcctggccaacatgttgaaaccctgtctctatta
aaaatacaaaaaagttagctgggcttggtggtgggcacctgtaatcccagctactccggaggctgaggcaggagaatca
cttgaacctgggaggcagaggttgcagtgagctgagatcacaccactgcactccaacctgggcaccagagtgagattac
atctaaaaaataaaataaagtaataaaaaagagagatattgatagctgttgttggaaatttcaacttccatctcacttc
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ggtttaatgaaatagctgtcatataatcactgtttttgaaagaggagaattagttgctatctgtacattttgggtatgt
gaactatttggatagaactctgagaaatgcattcagaacaacaaacaaaatcataggagaaatagctaagtgggaaggg
gcatataagagttgttgaaaaagttatttcttgagaaaccagctctaatgctaggcaagtcacttgctttgggggaggc
ctcagcttctctgtctataagattgcagcaggggtgtagtgggaatgagtcttcaacattccaagagattttatctact
aatacgacagtcaaatggagcatgactttgtggaagcctctcctcttccacccagaggggccaatttctctgtcccagt
gagatgttgacacttgtatgatccctgcttggagacttccctcttctggaacctgccctggctcaggcatgagggctga
ctgtcacccttcgataggagcccagcactaaagctcatgtgttggcagtgttcttgcgggaaggaaaaagaccagccag
cccatttgttactgcacaagcaaacagcttctggtagctgtacagatacatgcactttctttcctcactgtgtttccat
agacagatttagtgctgtagaagagtagagggcagtcacgggaaggagttcctgtttttctttggctatgccaaatgg
ggaaaaatcctcctatcttgtctttttagtgtcatcctctctcccctttcttcttctttataattctcatctctcatc
tctcctggaaatgtgcatgtcaagttcaaaagggcacaatgttttggtgaggaagaggtgggagaacacgtgccaggtg
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gtgtgtgtgtgtatttcttttgccagcatcactgaatctgtctgctgtctggtattccaggttttggtttagggaaa
agtaaaagtaattttataatcccagctgtcatttaagccacccctttgtgggtagcatatggtccactctctcagttca
ttgtcctaaagatgcttcatcagaaaggaataacttccaccccgttactctctgtccccttactctgctttatttttct
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gcactcgataaatatttgttgtggctcatgggcaccttgcagagttaaggctgcagttgtttgtggaatttataagtgg
taatgaatatttatctactattcctcttccaaggcgatcacacaataatcaggctttacactatccagttcttaggtct
tccaagttatgacttgtgaggtatgttaattatgataatagaaggcagtttatttggttcagatttattgatgtgtaat
ttaccacagtaagacttccccttttacaaaagtatgatgagttttgacaaatggatacacatgtgtatctaccactgcca
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tttatatttttagtagagatggggtttcaccatgttggccaggctgatctcaaactcttgacctcaggtgatccgccca
cctctggctcccaaagtgctaggattacaggcatgagccactgtgcccagccccagttttatttattcaccagttgatg
gtcttttcgacaactaattgtttccagtttttggctattctgtataaggcttctataaatattcacaaatacctaggat
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Fig. 12 (SHEET 2 OF 32)

gagggagggaaggaagctgtgttggttttcacacagggattgatggaatctggctcttatggacacagaactgtgtggt
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Fig. 12 (SHEET 3 OF 32)

SEQ ID NO: 15
Genomic contig containing ABC1 exon 2:

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Fig. 12 (SHEET 5 of 32)

SEQ ID NO 16
Genomic contig containing ABC1 exon 3:

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Fig. 12 (SHEET 6 OF 32)

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ctcctcgatttcaacagGCCATTTTCCAAATAAAGCCATGCCCTCTGCAGGAACACTTCCTTGGGTTCAGGGGATTATCT
GTAATGCCAACAACCCCTGTTTCCGTTACCCGACTCCTGGGGAGGCTCCCGGAGTTGTTGGAAACTTTAACAAATCCATg
taagtatcagatcaggttttctttccaaacttgtcagttaatccttttccttcctttcttgtcctctggagaattttgaa
tggctggatttaagtgaagttgtttttgtaaatgcttgtgtgatagagtctgcagaatgagggaagggagaattttggag
aatttggggtatttggggtatccatcacctcgagtatttatcatttctgtatgttgtgaacatttcaagtcctgtctgct
agctattttggaatatactatatgttgttaatgatatcatgcagcagacgtgcatctgaatgggctggctctaggagcta
gagggtaggggctggcacaaagatgcatgctggaagggtccttgcccataagaagcttacagccaaggctaggggagttc
tgtcttctctgcatcaggtcacctctctcacctctgtcactgccccatcagactacaatgtctgcaggtctttctcccct
gagtgtgagctccctgagcaaagcaggatgctgccccttccctttgtattccttgctccttgcttcagtgcctgtacata
agtatgggcataataagtgtcccccaaatgagacattgaggattcttcaaatgcacaggaccgtgatgtgagttaggacg
gagtaaggacgatgggatgtggctcatgacaatcctgaggaagctgcagctgcggcacgcagggccacactgtcatgttc
atggaccctagactggctttgtagcctccatgggccccttccatacac

Fig. 12 (SHEET 7 OF 32)

SEQ ID NO 17
Genomic contig containing ABC1 exon 4:

tcatgactgccattggtataaagatgaatataatccagaccagattcatgattattcatacatttttagtgtattaactt
ttaattctgcttttaaaataaattaaaacattctaatatgcccttaagagtatcccagcccaggccactgagcctactgt
ggttcatggataagtttgcccctgggggcatgtgtgtgcatgcatgtgtgtgcacatgcatgatgagccgggccttgaag
ggtggtaagatttgggtgtgtagaccaatggagaaaggcatttggggcagtgatgatgggtgggggagggaacatggtga
tgaatggagctgggtgtggggagccatgggagtgggttagggccagcctgtggaggacctgggagccaggctgagttcta
tgcacttggcagtcacttctgtaaagcagcagaggcagttggcctagctaaagcctttcgccttttcttgcacccttttac
agTGTGGCTCGCCTGTTCTCAGATGCTCGGAGGCTTCTTTTATACAGCCAGAAAGACACCAGCATGAAGGACATGCGCAA
AGTTCTGAGAACATTACAGCAGATCAAGAAATCCAGCTCAAgtaagtaaaaaccttctctgcatccgtttataattggaa
attgacctgcaccagggaaagagagtagcccaggtgtctggggcttgttcccattagatcttccccaaggggtttttctc
cttggtggctggcctgtggggcccctctccaggaggcattggtgaagaaactaggggagctggttgccacagacagtgat
gtactaatcttctctgggaagacagaagaaaagtccccagggaagaatactacagacttggccttagggacagctagggg
tgcagattgctgccaactgcatttttctgaagttggccatatggttgcagtgaatggatttatagacagagtatttctg
tgcatataagagcaattacagttgtaagttgatatggataagtgaaagttaagcacttctttctaaaaagagaatgcaat
tcattttcccctaatcatttcaattagtctgatgggcatttgaacttgttgtctttaaaaagtgaaatctttacctctga
tctggtaagtatccaggcaatttcttgtgtgccacccaggaggtatctggggagtgggcattttctgactgaggcattgg
ctgccatagcatcagagcagccttccaggcagtggcctggcaaggggacagaggctggtgggagcagctggctgagtgca
gccagtaatggcatgt

Fig. 12 (SHEET 8 OF 32)

SEQ ID NO 18
Genomic contig containing ABC1 exon 5:

agctctccaggtgattctgatgcatacttaagtttgagaaccattgcttgttttgcattaaacaggagattagtctctgc
agcttgtgggaataaagctttaaatctctccaattttagctctgtgaaaaggcagtggggagacaggaatgaacggacta
gtgccacaaagctcaggtggggtgggtgagatcatttagaagagaaagaccgggcatggtggctcacgcctgtactgtca
gcactttgggaggccaaggcaggttggatcacaaggtcaggagtttgagaccagcctgcctatcatggtgaaaccctgtc
tgtactaaagataaaaaaaaaaaaatttgccagtcatggtgatgcatacctgtaatcccagctactcgggaggctgaggc
aggagaatctcttgaacccgggaggcgggggttgcagtgagctgagattccaccattgcactccaacctaggtgacaggg
tgagactccgtctcaaaataaaaaaaaaaaaagaaaaggaaaggctgtgtgtgtgtgtatgtgtgtgtgtgtgtgtgt
gtgtgtgtaacagcaccatcacactgtttgagttgaggagcacatgctgagtgtggctcaacatgttaccagaaagcaat
attttcatgcctctcctgatatggcgatgctcccctatctcattcctgtgtgtgtttagccaggcaactgttgatcatca
atattatgataacgtttctccactgtcccattgtgcccacttttttttttttttgagttacttactaaataaaaataaa
acactatttctcaatagACTTGAAGCTTCAAGATTTCCTGGTGGACAATGAAACCTTCTCTGGGTTCCTGTATCACAACC
TCTCTCTCCCAAAGTCTACTGTGGACAAGATGCTGAGGGCTGATGTCATTCTCCACAAGgtaagctgatgcctccagctt
cctcagtagggctgatggcaattacgttgtgcagctactggaaagaaatgaataaacccttgtccttgtaatggtggtga
aggggagggaggtagtttgaatacaacttcacttaattttacttccctattcaggcaggaattgccaaaccatccaggag
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tttcctcctacaagggatacattttaagttgagttaaacttaaaaaatattcacagttctgaggcaataaccgtggttaa
gggttattgatctggaggagctctgtctaaaaaattgaggacaggagactttagacaagggtgtatttggagacttttaa
gaattttataaaataagggctggacgcagtggcactgagttgagaactgttgcttgctttgcattaaataggagatcagt
ccctgcagcttgtgggaataaggctttaaatctctccaattttagctctgtgagatggcactggggaaacagaaatgaac
ggactagtgtcacaaagctcaggtgggatggacgagatcacttcaaaggtctgtaatcccacgtctataatcccagcact
ttgggaggccaaggcgggaaaatcacttgaggtcaggagttcgagaccatcctggccaacaatgcaaagcctgtctctac
taaaaatatgaaaattagctcagcgtggtggcatgctcctgtagtcccagctactcgtgaggctgagacaggagaatcgt
ttgaacctgggaggcggaggttgcagtgagccaatatcacgccattgcactccagcctggctgacagagtgagactccat
ctcaaaaaaaaaaaaaaaaaaagaattttataaaatcaggaaataatattagtgtttatgttgaattttaactttagaat
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atttttcagagacacttttgagcttattctctggcagaaaggggaactgcttcctcccctatctcgtgtctgcatacta
gcttgtctttacaagaagcagaagtagtggaaatgtttattcttgaaaataagctttttgcttcacatgatctagaattt
ttaaaattagaaaaatgtgcttactgcg

Fig. 12 (SHEET 9 OF 32)

SEQ ID NO 19
Genomic contig containing ABC1 exon 6:

agtaaaatggagaattccaaattctgaaattgttagaacatagttctgtgtcttagttaaatatcgacacttacagataa
atagcataaatgctttctccccatatttcagcccagtcctacttaaagacaacataaattgcaaaatagtgaggatgttg
ttcatctaataaaagtggttccaggaattcagactctggattcctgtttgccaaatcatgtgtcccactcttaagaaaac
gagttggactntggatttttctttgcaagagggacaagagtgtgggagatactgagttaatgcaacttgcaggttttaag
tgtcctgtcattgtgccttgtgctttgatacattctgagtttcagtaaagagacctgatgcattggactgttgcaatgga
acctgttttaagatcttcaaagctgtattgatatgaagttctccaaaagacttcaaggacccagcttccaatcttcataa
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GCAATGGATCAAAATCAGAAGAGATGATTCAACTTGGTGACCAAGAAGTTTCTGAGCTTTGTGGCCTACCAAGGGAGAAA
CTGGCTGCAGCAGAGCGAGTACTTCGTTCCAACATGGACATCCTGAAGCCAATCCTGgtgagtagacttgctcactggag
aaacttcaagcactaatgctttcggaatgtgaggcttttccttggacagcatgactttgttttgtagaaaagtacggctg
gctgggagtttgtgatataatttagttcagtggtattctaagtgttcttagtgttctttcagacttttgggccatctccc
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acagttggaaggccctggaattagatgagaccacactatttagcttacttagtaataacattg

Fig. 12 (SHEET 10 OF 32)

SEQ ID NO 20
Genomic contig containing ABC1 exon 8:

ccgtttggcaaatgctcagtaaaagaaaagggttagaaggggagaaaggcattttatcccaagccttcaggaatcaggat
gaggatgtcttcaccttgtggtggggagtaattatacaattagagacagcacattggagtgtggctgatatgctgtgtga
tgatagctctagctctctgcctagcagaggaaggacatttcaatagaagaaaaagtttaagaccttgccgagaaacagag
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caagggaagaaaaaggcaggggatgacattgttgacaattgtgaggaattaccatgtgccaggcactgtgcgaggggctt
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ctgttatttaaaaatctctagggctgttccaataagcaacaaaaggcaaaatggcctggttctctgtccccttttctgtct
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Fig. 12 (SHEET 12 OF 32)

cagaatccgcatttccaacaatgtctccagtaatgctgatgctgctcgtccctggaccacagattgggtagccaggttct
ggcaagctcatcccaaggctttgagatgacatcagacaaaatatgttctgggacatggcttttgagaggtcaagaaaata
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GCTCCTCCACCCAAATCTACCAGGCTGTGTCTCGTATTGTCTGCGGGCATCCCGAGGGAGGGGGGCTGAAGATCAAGTCT
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gcaactttaattaaatcccatctcctcctctcccccagcttgcaagttgacccaaggaagccttcatttccatgacagac
ttaattgtgagggcatcctca

Fig. 12 (SHEET 13 OF 32)

SEQ ID NO 21
Genomic contig containing ABC1 exon 9 through 22:

actgtgttagcaaggatggtctcgatctcctgacctcgtgatccgcctgtatcggcctcccaaagtgctgggattacagg
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Fig. 12 (SHEET 15 OF 32)

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Fig. 12 (SHEET 18 OF 32)

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Fig. 12 (SHEET 19 OF 32)

SEQ ID NO: 22
Genomic contig containing ABC1 exon 23 to 28:

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acacggtggaat

Fig. 12 (SHEET 21 OF 32)

SEQ ID NO: 23
Genomic contig containing ABC1 exon 29:

gggaagcatttaaaaaaaaaaagtatatatatatatatatatatatatatgtaatgtgaattggcctctttttctctaa
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Fig. 12 (SHEET 22 OF 32)

SEQ ID NO: 24
Genomic contig containing ABC1 exon 30 and 31:

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tttgaggggagaaggtttggaccacactgtgcccatgcctgtcccacagcagtaaagtcacaggacagactgtggcaggc
ctggcttccaatcttggctctgcaacaaatgagctggtagcctttgacaggcctgggcctgtttcttcacctctgaatta
gggaggctggaccagaaaactcctgtggatcttgtcaactctggtattcttagagactctgtttgggaaggagtcctgag
ccatttttttttcttgagaatttcaggaagaggagtgcttatgatagctctctgctgcttttatcagcaaccaaattgc
aggatgaggacaagcaattctaaatgagtacaggaactaaaagaaggcttggttaccactcttgaaaataatagctagtc
caggtgcggggtggctcacacctgtaatctcagtattttgggatgccgaggtggactgatcacctaaggtcaggagttcg
aaaccagcttggccaatgtggcgaaaccctgtctctactaaaaattcaaaaattagccaggcatggtggcacatgcctgt
aatcccagttacttgggaggctgaagcaggagaattgcttgaacctgggaggtggaggtcgcagggagccaaaattgcgc
cactgtactccagcctgagcaacacagcaaaactccatatcaaaaaataaaatgaataaaataacagctaatctagtcat
cagtataactccagtgaacagaagatttattaggcatagtgaatgatggtgcttcctaaaaatctcttgactacaaagaa
tctcatttcaatgtttattgtttagatgttcagaataaattcttgggaaagaccttggcttggtgtaagtgaattaccag
tgccgagggcagggtgaaccaagtctcagtgctggttgactgagggcagtgtctgggacctgtagtcaggtttccggtca
cactgtggacatggtcactgttgtccttgatttgttttctgtttcaattcttgtctataaagacccgtatgcttggtttt
catgtgatgacagAGAAAACAAAACACTGCAGATATCCTTCAGGACCTGACAGGAAGAAACATTTCGGATTATCTGGTGA
AGACGTATGTGCAGATCATAGCCAAAAGgtgacttttactaaacttggcccctgccttattattactaattagaggaat
taaagacctacaaataacagactgaaacagtgggggaaatgccagattatggcctgattctgtctattggaagtttagga
tattatcccaaactagaaaagatgacgagagggactgtgaacattcagttgtcagcttcaaggctgaggcagcctggtct
agaatgaaaatagaaatggattcaacgtcaaattttgccac

Fig. 12 (SHEET 23 OF 32)

SEQ ID NO: 25
Genomic contig containing ABC1 exon 32:_

gcatgctggagtgatagtgaccatgagtttctaagaaagaagcataatttctccatatgtcatccacaattgaaatatta
ttgttaattgaaaaagcttctaggccaggcacggtggctcatgcctgtaatcccagcactttaggagccaaggcgggtgg
atcacttgaggtcaggagtttgagaccagcctggccaacatggggaaaccctgtctctactaaaaatacaaaataagctg
ggcgtggtggtgcgtgcctgtaatcccagctacttgggaggctgaggcaggagaactgcttgaatctgggaggcggaggt
tgcagtgagctgagttcatgccattgcattccagcctgggcaacaagagcgaaaccatctcccaaaagaaaaaaaaaaga
aagaaaaagcttctagtttggttacatcttggtctataaggtggtttgtaaattggtttaacccaaggcctggttctcat
ataagtaatagggtatttatgatggagagaaggctggaagaggcctgaacacaggcttcttttctctagcacaaccctac
aaggccagctgattctagggttatttctgtccgttccttatatcctcaggtggatatttactccttttgcatcattagga
ataggctcagtgctttctttgaactgatttttttgtttctttgtctctgcagCTTAAAGAACAAGATCTGGGTGAATGAGT
TTAGgtaagttgctgtctttctggcacgtttagctcaggggggaggatggtgttgtaggtgtgcttggattgaagaaagcc
ttggggattgtttgtcactcacacacttgtgggtgccatctcactgtgagga

Fig. 12 (SHEET 24 OF 32)

SEQ ID NO: 26
Genomic contig containing ABC1 exon 33 to 36:

gctttatagagtttctgcctagagcatcatggctcagtgcccagcagcccctccagaggcctctgaatatttgatatact
gatttccttgaggagaatcagaaatctcctgcaggtgtctagggatttcaagtaagtagtgttgtgaggggaatacctac
ttgtactttccccccaaaccagattcccgaggcttcttaaggactcaaggacaatttctaggcatttagcacgggactaa
aaaggtcttagaggaaataagaagcgccaaaaccatctctttgcactgtatttcaacccatttgtccttctgggttttga
aggaacaggtgggactggggacagaagagttcttgaagccagtttgtccatcatggaaaatgagataggtgatgtggcta
cgtcaggggcccgaaggctccttgttactgatttccgtcttttctctctgccttttccccaagggccaggacccctgga
tctctgggcagagcagacgcaggcccctataatagccctcatgctagaaaggagccggagcctgtgtataaggccagcgc
agcctactctggacagtgcagggttcccactctcccaactccccatctgcttgcctccagacccacattcacacacgagc
cactgggttggaggagcatctgtgagatgaaacaccattctttcctcaatgtctcagctatctaactgtgtgtgtaatca
ggccaggtcctccctgctgggcagaaaccatgggagttaagagattgccaacatttattagaggaagctgacgtgtaact
tctgaggcaaaatttagccctcctttgaacaggaatttgactcagtgaaccttgtacacactcgcactgagtctgctgct
gatgatactgtgcaccccactgtctgggttttaatgtcaggctgttcttttagGTATGGCGGCTTTTCCCTGGGTGTCAG
TAATACTCAAGCACTTCCTCCGAGTCAAGAAGTTAATGATGCCATCAAACAAATGAAGAAACACCTAAAGCTGGCCAAGg
taaaatatctatcgtaagatgtatcagaaaaatgggcatgtagctgctgggatataggagtagttggcaggttaaacgga
tcacctggcagctcattgttctgaatatgttggcatacagagccgtctttggcatttagcgatttgagccagacaaaact
gaattacttagttgtacgtttaaaagtgtaggtcaaaaacaaatccagaggccaggagctgtggctcatgcctgtaatcc
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gtatctactaaaaatacaaaaaaattagctgggcttggtggcacacacctgtaatcccagctacttgggaggctgaggca
ggagaattgcttgaaccctgtaggaagaggttgtagtgagccaagatcgcaccgttgcactccagcctgggcaacaagag
caaaactccatctcaaaaaacaaattaaatccagagatttaaaagctctcagaggctgggcgcggtggcttacacctgtt
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ctgtctctgctaaaaacatagaaaaattagccgggcatggtggcgtgcgcctgtaatcccagctactcgggaggctgagg
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acatactttgctgaaayaatcactgactaaataggaaatgaatctttttttttttttttttaagctggcaagctggtctg
taggacctgataagtactcacttcatttctctgtgtctcaggtttcccatttttaggtgagaattaaggggctctgataa
aacagaccctaggattgtggacagcagtgatagtcctagagtccacaagtctgcttttgagtgatgggcccatgtatctg
gcacatctgcaggcagagcgtggttctggctcttcagatgatgccggtggagcactttgaggagtcctcaccccaccgtg
ataaccagacattaaaatcttggggctttgcatcccaggatttctctgtgattccttctagacttgtggcatcatggcag
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ggtagtggcattgctcttcacagggccgtcctgttgtccacaggttccagattgactgttgccccttatctatgtgaaca
gtcacaactgaggcaggtttctgttgtttacagGACAGTTCTGCAGATCGATTTCTCAACAGCTTGGGAAGATTTATGAC
AGGACTGGACACCAGAAATAATGTCAAGgtaaaccgctgtctttgttctagtagctttttgatgaacaataatccttatg
tttcctggagtactttcaactcatggtaaagttggcaggggcattcacaacagaaaagagcaaactattaactttaccag
tgaggcagtacggtgtagtgtagtgattcagagaatttgctttgccaccagacataccaggtaaccttgactaagttact
taacctatctaaacctcagttycctcatctgtgaaatggagacagtaatcatagctatttccaaactgttgtgagaattc
aatgagttaaaggtataaggtcctcaccacagcgcctgcccacatagtcagtgatcactatgtcctgaacactgtaatta
cttcgccatattctctgatcatagtgttttgccttggtatgtgactagaatttctttctgaggtttatgggcatggttgg
tgggtatgcacctgcctgcaggagcccggtttgggggcattaccttgtacctggtatgttttctttcagGTGTGGTTCAA
TAACAAGGGCTGGCATGCAATCAGCTCTTTCCTGAATGTCATCAACAATGCCATTCTCCGGGCCAACCTGCAAAAGGGAG
AGAACCCTAGCCATTATGGAATTACTGCTTTCAATCATCCCCTGAATCTCACCAAGCAGCAGCTCTCAGAGGTGGCTCTg
taagtgtggctgtgtctgtatagatggagtggggcaagggagagggttatggagaaggggagaaaaatgtgaatctcatt
gtaggggaacagctgcagagaccgttatattatgataaatctggattgatccaggctctgggcagaagtgataagtttac
gaattggctggttgggcttcttgaactgcagaagagaaaatgacactgatatgtaaaaatcgtaacatttagtgaattca

Fig. 12 (SHEET 25 OF 32)

tataaagtgagttcaaaaattgttaattaaattataatttaattataagtgtttaatcagtttgatttgtttaaaaacca
ctgttttaaatttggtggaatatgtttttattagcttgtatctttaattcctaaattaagctgtgtgtgtgtgtgtgtgt
gtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgaagtttaaagccaggatgagctagtttaaagtatgcagcctttggagtc
atacagatctgggtttgaatctggtctctaaactttatagatgtatgatattaaatgaggcagttcatgtaaattgccaa
gcccagcactcagcacagagttgatatttcacacacattagataccttcctgtatgtggagcatggcagttcctgtttc
tgctttactcctacaggatactaatataggacactaggatctttataccaagaccccatgtaatgggcttatgagaccat
tcttcttataaaaatctgacagaatttttgtatgtgttagatcaataggctgcatactgttattttcaagttgatttaca
gccagaaatattaatttatttgagtagttacagagtaatatttctgctctcatttagttttcaagccccactagtccttt
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gacttaaaaatgatcatcttaaccctgaataaaatgtgtctggtgaacagatgtttttccttggctgtgcctcagatatc
tctgtgtgtgtgtacgtgtgtgtttgtctgtgtgtccatgtcctcactgattgagccctaactgcatcaaagacccctca
gattttcacacgctttttctctccagGATGACCACATCAGTGGATGTCCTTGTGTCCATCTGTGTCATCTTTGCAATGTC
CTTCGTCCCAGCCAGCTTTGTCGTATTCCTGATCCAGGAGCGGGTCAGCAAAGCAAAACACCTGCAGTTCATCAGTGGAG
TGAAGCCTGTCATCTACTGGCTCTCTAATTTTGTCTGGGATATGgtaaggacacaggcctgctgtatctttctgatgtct
gtcagggccatggattgatatggataagaaagaaagagctctggctatcatcaggaaatgttccagctactctaaagatg
tatgaaaaagaaatagccagaggcaggtgatcactttcatgacaccaaacacagcattgggtaccagagttcatgtcaca
ccagagggaaaattctgtacacaatgatgaaaattaataccactaccacttaagttcctatgtgacaactttcccaagaa
tcagagagatacaagtcaaaactccaagtcaatgcctctaacttctctgatgggttttaacctccagagtcagaatgttc
tttgccttactaggaaagccatctgtcatttagaaaactctgtacattttatcagcagcttatccatccattgcaaatat
tgtttttgtgccasccacaatatattgcttctatttggaccaatatgggggatttgaaggaattctgaagttctaattat
atttcaactctactttacaatatctccctgaaatatatctccctgtaacttctattaattataagctacacagagcaaat
ctaattcttctcccaccgaacaagtccctggatatttaaaaataactctcatactctcatttaacctgagtattacccag
ataagatgatatatgagaatacaccttgtaacctccgaagcactgtacaaatgtgagcaatgatggtggagatgatgatg
agatctttgctgtttataccaagccccttagactgtgtcactcttctgatccggttgtccttgtatggccatgctgtata
ttgtgaatgtcccgttttcaaaagcaaagccaagaattaaccttgtgttcaggctgtggtctgaatggttatgggtccag
agggagttgatctttagctcacacttctattactgcagcacaaagattttgcattttggaaggagcaccgtcttactggc
aacttagtggtaaaccaaaacctccatttcacacaaatgattgtgaaattcgggtctccttcattctatacaaattcatt
tgatttttttgaaactaaactttatatttatccatattaaattacatgggttttatttttgttttatcttgattcagtaa
ttactcctttcagtaaacacagactgagtgctgtgtgtctgacttatgccaggcataggtgattcagagatgaaaggtca
agtccctgaacccatctcttgtcttcctgggtattatctgtccctccctgctttagagctcctgaaatttgctagaagca
tgtcttcatctaagttgttgataaacacatcaagtaggattggactgaggcagagccctgtagtctgaagctgcagttct
tctagcggctgacaagccccactatcacttccctgctggtgctttgctctgccagctgtgaattctcataattgtcctat
cgtcaagtctttatttctgcattttactgcttgatacactgtcaggacagactttaaaattattctcagtgcgatgaaac
aattctgacattcatgttatgagcagttacctcataaatagattacatg

Fig. 12 (SHEET 26 OF 32)

SEQ ID NO: 27
Genomic contig containing ABC1 exon 37 to 41:

aaattactctgactgggaatccatcgttcagtaagtttactgagtgtgacaccttggcttgactgttggaaagacagaaa
gggcatgtagtttataaaatcagccaaggggaaaatgcttgtcaaaatgtattgtcgggtattttgattaatagtttatg
tggcttcattaattcagagttactctccaatatgtttatctgccctttcttgtctgataatggtgaaaacttgtgtgatg
cattgtatatttgatttaggggtgaactggatgtctttgttttcacttttagTGCAATTACGTTGTCCCTGCCACACTGG
TCATTATCATCTTCATCTGCTTCCAGCAGAAGTCCTATGTGTCCTCCACCAATCTGCCTGTGCTAGCCCTTCTACTTTTG
CTGTATGGgtaagtcacctctgagtgagggagctgcacagtggataaggcatttggtgcccagtgtcagaaggagggcag
ggactctcagtagacacttatctttttgtgtctcaacagGTGGTCAATCACACCTCTCATGTACCCAGCCTCCTTTGTGT
TCAAGATCCCCAGCACAGCCTATGTGGTGCTCACCAGCGTGAACCTCTTCATTGGCATTAATGGCAGCGTGGCCACCTTT
GTGCTGGAGCTGTTCACCGACAATgtgagtcatgcagagagaacactcctgctgggatgagcatctctgggagccagagg
acagtgtttaattgtgatcttattccacttgtcagtggtattgacactgctgactgccttgtcctgtcttcagagtctgt
cttccctgagaaggcaaagcacctttctttcttgctgtgccttacattttgctggtcaagcctttcagtttcttttgaca
gtttttttttacttctttctttttcaatgttgctcttaccaagagtagctcctctgccttccactttacacatgagagct
gggcgacgcattcagtcctaaggcttttaccatcacctctcttggtgtttttattgtcatctctaagatcaatgccttta
gccttgatcataaccttgaactctaatctcaaattctcacttgcctagtggattgctccatttagatagtatatagatac
cccaacctggatatgtcctagttttctttcccccttggaacttaatgcttttcttgccatccctgtcacactcagtggcac
taccatccactcggttgcccaagctggctcttagagttatcctagatgcttgctttgctgttgcagatttcccacattca
actggttatgttgtcagttcttccaggtatggacctctaaaataaggcttcctctccattccggttgtcattgcctttgt
ccaaacacagcacacaaggcctttacagttgcacaactcttcctgtccatacccaccacacccctttcccagctgtaagc
ttcagatgagttgcctccaaccaccatgctcctgtaggcctggcttgaaatgcccttcttctgtcacagggtctggtagt
atatcccttgcccttcaagatttagctaaaatgtgaagctttccttacctgctgggaggtgttctctcttttctctgtgc
tctcagagtccttagtccatgcctccagtacaacgtacatccacttacatggtaatttcctgtttacatacttttcctac
tcggagtggagtctgtttcttaataattttgcctctcccatgccctagcacagtgcatccagcgtatagccccttattca
gttggtagatatttggccactgttgccttgtgggatcataagttctgatgtatttgagaagaatttctaaaattctgaca
aaatcctgaaactcaaatattgacccagacatgagcaatttgcttttcaaatgctaagggatttttaatggatttgcttt
aattaaatctagcctgtttctaagctttattcattatttctccatactcagagcatttctccagattttctaaagaatag
aattttattgctacatatcatcagctatgcctgctgctatttaattggtatctgaattaaaaggtctggtttgtccctag
agaatcaaatttttttcttcactcccatatttcagaacttgatacatttttaggataaaccatgaatgacacccgtttctt
ctccctcaccctcccttccctcccatttttttttttttttttttttagAAGCTGAATAATATCAATGATATCCTGAAGTC
CGTGTTCTTGATCTTCCCACATTTTTGCCTGGGACGAGGGCTCATCGACATGGTGAAAAACCAGGCAATGGCTGATGCCC
TGGAAAGGTTTGgtgagtgaagcagtggctgtaggatgctttaatggagatggcactctgcataggccttggtaccctga
actttgttttggaaagaagcaggtgactaagcacaggatgttcccccacccccatgcccagtgacagggctcatgccaac
acagctggttgtggcatgggttttgtgacacaaccatttgtctgtgtctctgatagcattgagaaaagtgaaagggcagt
tttgaaggtaaggaaaatagtgttatttgcttggatccactggctcatgccactgtctgggttggttagaagcactggaa
aagtcaaaccataactttgagaattaggtgatcagggaatcagaaggaaagatgcaaactttggctcttttaggcgaatc
atgtgcctgcagatgaggtcatttattatctttttacacagtctataaaattataatgtattacatctttttctaccttta
gaatggttaaaaatatttctccggtagccatatgattattattcatccattagataatatagtcaaatgggccatgttat
ttactgttcatagaagaggggcttttgcaacttgggctacaaaggagatatgtaaggaatttaaggaatggttacatgg
aactagatttaattgaatctagtggtttaattgattcactaggatatatgctactgaaaggggaatctgcttaaagtgct
ttctgatatttattattactaaaacttagaatttattaaaaatactgactgtgaaaattacttgggtcgtttgccttttt
aaaaggatttttggcatgtctcattaaaaaaagaaatactagatatcttcagtgaagttacaaatcgaatacacattggc
tctgaaattctgattgatactgggtcataaaaagttttcccaaatcagacttggaaagtgatcactctcttgttactctt
ttttccttgtcatgggtgatagccatttgtgtttattggaagatcggtgaattttaaggaacataggcccaaatttgagg
aagggccatggtttttgatccctccattctgaccggatctctgcattgtgtctactagGGGAGAATCGCTTTGTGTCACC
ATTATCTTGGGACTTGGTGGGACGAAACCTCTTCGCCATGGCCGTGGAAGGGGTGGTGTTCTTCCTCATTACTGTTCTGA

Fig. 12 (SHEET 27 OF)

TCCAGTACAGATTCTTCATCAGGCCCAGgtgagctttttcttagaacccgtggagcacctggttgagggtcacagaggag
gcgcacagggaaacactcaccaatgggggttgcattgaactgaactcaaaatatgtgataaaactgattttcctgatgtg
ggcatcccgcagccccctccctgcccatcctggagactgtggcaagtaggttttataatactacgttagagactgaatct
ttgtcctgaaaaatagtttgaaaggttcatttttcttgttttttcccccaagACCTGTAAATGCAAAGCTATCTCCTCTG
AATGATGAAGATGAAGATGTGAGGCGGGAAAGACAGAGAATTCTTGATGGTGGAGGCCAGAATGACATCTTAGAAATCAA
GGAGTTGACGAAGgtgagagagtacaggttacaatagctcatcttcagttttttcagctttatgtgctgtaacccagca
gtttgctgacttgcttaataaaagggcatgtgttcccaaaatgtacatctataccaaggttctgtcaattttattttaaa
aacaccatggagacttcttaaagaattcttactgagaattcttttgtgatatgaattcccattctcgaatactttggttt
tatatgcttacatttatgtgttagttattaaaacatactaatattgtatatctagtcaaactgagtagagagataatggt
gatt

Fig. 12 (SHEET 28 OF 32)

SEQ ID NO: 28
Genomic contig containing ABC1 exon 42 to 45:

ttttaaaatacctgcaatacatatatatgttgaatagatgaaaaattatgtagatgataatgaatgatacggttctaaaa
agacaggttaaaaagtaagttcacttttattttgagcttcagaatcattcagaagccagtcgccacaaacgcagaccaag
gctcttggcacatcaaatatgcctatggcttagggttattgacaagtcttatgttgcagtgtatgtggtttatagtcctg
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GGAAGCGGAAGCCTGCTGTTGACAGGATTTGCGTGGGCATTCCTCCTGGTGAGgtaaagacactttgtctatattgcgtt
tgtccctattagttcagactatctctacccaatcaagcaacgatgctcgttaagaggtaaaagtggattttaaaggcttc
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aatacaatttaagaaaaagcatggggctgggcgcagtgattcactcctgtaatcccagcactttgggaggccgaggtggg
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cacatctaaaacatgcttttgtgatccatttgggatggtgatgacattcaaatagtttttaaaaatagattttctcctt
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tttcacacattaactttggcctcaacttgacaactcaaataatatttataaatacagccacacttaaaatggtcccatta
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ggtttgaggtagttacgtgttaggggcatttatattcatgtttttagagtttgcttatacaacttaatctttccttttca
gTGCTTTGGGCTCCTGGGAGTTAATGGGGCTGGAAAATCATCAACTTTCAAGATGTTAACAGGAGATACCACTGTTACCA
GAGGAGATGCTTTCCTTAACAAAAATAGgtgagaaaagaagtggcttgtattttgctgcaaagactttgtttttaattta
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agaagcacataaaatcatccatgatttcaatatctagagataatcacaatttacatttccttttcagtctcattctcttct
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aaattgagagttttgcaaccatcaccacaatccagttttagaacttttccatcaccccacatctgtcttatatacacata
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ggctggagagcaatggcgcgaccttggctcactgcaacctccgcctcccaggttcaagcgattctcctgcctcagcctcc
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Fig. 12 (SHEET 30 OF 32)

SEQ ID NO: 29
Genomic contig containing ABC1 exon 46 to 49:

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Fig. 12 (SHEET 32 OF 32)

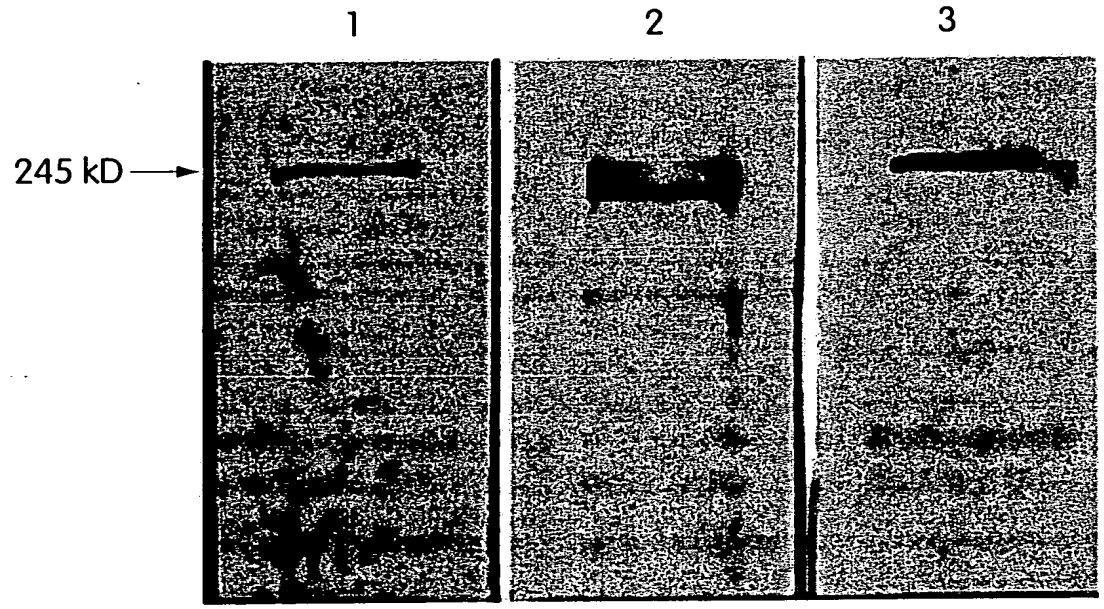

Fig. 13

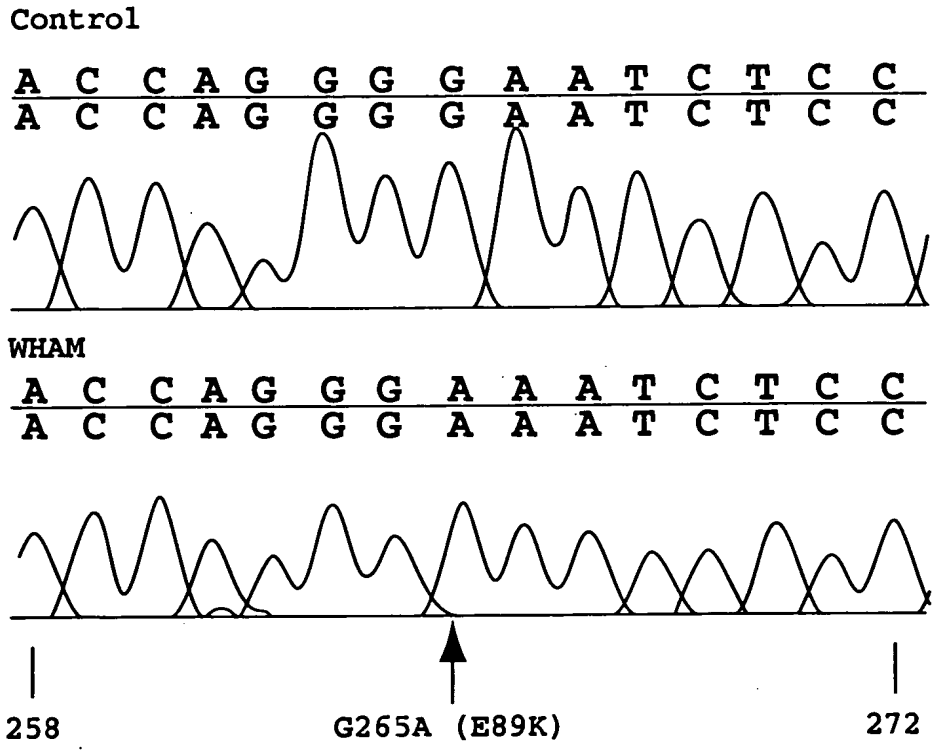

Fig. 14

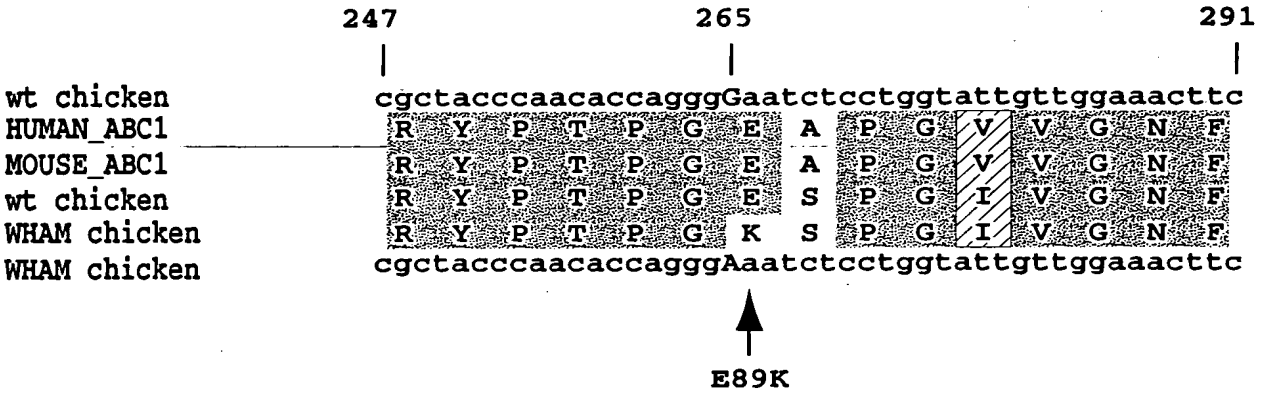

Fig. 15

No.	Name	Location in SEQ ID No. 14	Sequence	Sequence Length	Strand
1	PPRE	58-69	AGGTAAAAGTCA	12	Complement
2	PPRE	1997-2009	AGAGTAGAGGGCA	13	Lead
3	PPRE	2150-2161	ATGTCAAGTTCA	12	Lead
4	PPRE	2156-2169	AGTTCAAAAGGGCA	14	Lead
5	PPRE	4126-1139	AGGCCAGCAGGGCC	14	Complement
6	PPRE	5075-5087	AGGGCAGAAGTGA	13	Lead
7	PPRE	6604-6615	ATGCCAAGGTCA	12	Complement
8	PPRE	6731-6743	GGGGCAAGGGTA	13	Complement
9	PPRE	7220-7233	AGGTAATGAGGACA	14	Complement
10	PPRE	7554-7568	GGATCACGAGGTCA	15	Complement
1	SRE	159-166	CAGCCCAT	8	Lead
2	SRE	1133-1140	CAGCTCAC	8	Complement
3	SRE	1145-1152	CACACCAC	8	Lead
4	SRE	1809-1816	CAGCCCTC	8	Complement
5	SRE	1894-1901	CAGCCCAT	8	Lead
6	SRE	2563-2570	CAACCCAC	8	Lead
7	SRE	3303-3310	CAGCTCAC	8	Lead
8	SRE	3470-3477	CCGCCCAC	8	Lead
9	SRE	4784-4791	CTCCCCAC	8	Complement
10	SRE	4802-4809	CAGCCTAC	8	Complement
11	SRE	4970-4977	CACCTCAC	8	Complement
12	SRE	6487-6494	CAGCCTAC	8	Complement
13	SRE	6565-6572	CACCCAAC	8	Complement
14	SRE	6727-6734	CACCCTCA	8	Lead
15	SRE	7041-7048	CACCCAAC	8	Lead
16	SRE	8059-8066	CAGCCCTC	8	Complement
1	ROR(retinoic acid receptor related)	166-172	AGGGTCA	7	Complement
2	ROR(retinoic acid receptor related)	166-173	AAGGGTCA	8	Complement
3	ROR(retinoic acid receptor related)	263-370	ATGGGTCA	8	Lead
4	ROR(retinoic acid receptor related)	264-370	TGGGTCA	7	Lead
5	ROR(retinoic acid receptor related)	2218-2225	TAGGGTCA	8	Lead
6	ROR(retinoic acid receptor related)	2219-2225	AGGGTCA	7	Lead
7	ROR(retinoic acid receptor related)	3643-2649	TGGGTCA	7	Lead
8	ROR(retinoic acid receptor related)	6604-6610	AAGGTCA	7	Complement
1	SREBP-1 or "E box"	473-479	ACACCTG	7	Complement
2	SREBP-1 or "E box"	536-541	ACACATG	7	Lead
3	SREBP-1 or "E box"	537-543	TCATGTG	7	Complement
4	SREBP-1 or "E box"	655-661	TCATGTG	7	Complement
5	SREBP-1 or "E box"	925-931	ACACTTG	7	Lead
6	SREBP-1 or "E box"	967-973	TCACTTG	7	Lead
7	SREBP-1 or "E box"	968-974	TCAAGTG	7	Complement
8	SREBP-1 or "E box"	1053-1069	ACAGGTG	7	Complement
9	SREBP-1 or "E box"	1104-1110	TCACTTG	7	Lead
10	SREBP-1 or "E box"	1105-1111	TCAAGTG	7	Complement
11	SREBP-1 or "E box"	1561-1567	TCACTTG	7	Lead

Fig. 16 (SHEET 1 OF 2)

Serial No.: 09/526,193
Applicant: Hayden et al
Filed: 15 March 2000
Attorney Docket: 760050-19

12	SREBP-1 or "E box"	1670-1676	TCAAATG	7	Lead
13	SREBP-1 or "E box"	1748-1754	ACACTTG	7	Lead
14	SREBP-1 or "E box"	1749-1755	ACAAGTG	7	Complement
15	SREBP-1 or "E box"	1852-1858	TCATGTG	7	Lead
16	SREBP-1 or "E box"	1853-1859	ACACATG	7	Complement
17	SREBP-1 or "E box"	1899-1905	ACAAATG	7	Complement
18	SREBP-1 or "E box"	2199-2205	ACACGTG	7	Lead
19	SREBP-1 or "E box"	2393-2399	ACAGCTG	7	Complement
20	SREBP-1 or "E box"	2669-27005	ACACCTG	7	Lead
21	SREBP-1 or "E box"	2677-2683	TCACATG	7	Complement
22	SREBP-1 or "E box"	2740-2746	ACAACTG	7	Complement
23	SREBP-1 or "E box"	2969-5975	ACAAATG	7	Lead
24	SREBP-1 or "E box"	2979-2985	ACACATG	7	Lead
25	SREBP-1 or "E box"	2981-2987	ACATGTG	7	Lead
26	SREBP-1 or "E box"	2980-2986	ACATGTG	7	Complement
27	SREBP-1 or "E box"	2982-2988	ACACATG	7	Complement
28	SREBP-1 or "E box"	3461-3467	TCAGGTG	7	Lead
29	SREBP-1 or "E box"	3462-2468	TCACCTG	7	Complement
30	SREBP-1 or "E box"	3547-3553	TCAACTG	7	Complement
31	SREBP-1 or "E box"	3752-3758	ACACATG	7	Lead
32	SREBP-1 or "E box"	4226-4232	TCACCTG	7	Lead
33	SREBP-1 or "E box"	4582-4588	ACACGTG	7	Complement
34	SREBP-1 or "E box"	4588-4594	TCAGTTG	7	Lead
35	SREBP-1 or "E box"	4861-4867	TCAGGTG	7	Lead
36	SREBP-1 or "E box"	4951-4957	ACAAATG	7	Lead
37	SREBP-1 or "E box"	5096-5102	TCAAATG	7	Complement
38	SREBP-1 or "E box"	5912-5918	ACAGTTG	7	Lead
39	SREBP-1 or "E box"	5913-5919	TCAACTG	7	Complement
40	SREBP-1 or "E box"	6245-6251	ACACATG	7	Complement
41	SREBP-1 or "E box"	6288-6294	ACAACTG	7	Complement
42	SREBP-1 or "E box"	6623-6629	TCATTTG	7	Lead
43	SREBP-1 or "E box"	6836-6842	TCACCTG	7	Lead
44	SREBP-1 or "E box"	6837-6843	ACAGGTG	7	Complement
45	SREBP-1 or "E box"	7032-7038	ACAGGTG	7	Complement
46	SREBP-1 or "E box"	7069-7075	TCAGGTG	7	Lead
47	SREBP-1 or "E box"	7101-7107	ACATATG	7	Complement
48	SREBP-1 or "E box"	7138-7144	ACAGTTG	7	Lead
49	SREBP-1 or "E box"	7139-7145	TCAACTG	7	Complement
50	SREBP-1 or "E box"	7240-7246	ACACCTG	7	Complement
51	SREBP-1 or "E box"	7467-7473	ACAGGTG	7	Lead
52	SREBP-1 or "E box"	7640-7646	TCATTTG	7	Lead
53	SREBP-1 or "E box"	7641-7647	TCAAATG	7	Complement
54	SREBP-1 or "E box"	7653-7659	TCAGTTG	7	Lead
55	SREBP-1 or "E box"	7654-7660	ACAACTG	7	Complement
56	SREBP-1 or "E box"	7735-7741	ACAAATG	7	Lead
57	SREBP-1 or "E box"	7838-7844	TCAGGTG	7	Complement
58	SREBP-1 or "E box"	7880-7886	TCATCTG	7	Complement
59	SREBP-1 or "E box"	8051-8057	TCAGCTG	7	Lead
60	SREBP-1 or "E box"	8052-8058	TCAGCTG	7	Complement

Fig. 16 (SHEET 2 OF 2)